*In Two Sections—Section Two*

# MECHANICAL ENGINEERING

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RECEIVED MAY 5 1921 A. C. L. BOARD

## COUNCIL IS GUEST OF BOSTON SECTION

### Program Includes Dinner to John A. Stevens and Meeting with Local Societies

A complimentary dinner to Mr. John A. Stevens, leader of the A.S.M.E. Boiler Code Committee, and an all-day meeting with the Boston Local Section and with the local engineering societies, constituted the program of the visit of the Council to Boston, Tuesday and Wednesday, March 22 and 23.

There were present: President Edwin S. Carman, presiding; Vice-Presidents L. P. Alford, Robert B. Wolf, Wm. B. Gregory; Managers D. S. Kimball, F. O. Wells, H. M. Wells, E. F. Scott, C. L. Newcomb; Past-Presidents F. J. Miller and C. T. Main; Chairmen of Standing Committees: G. A. Orrok, Publication and Papers; John L. Harrington, Constitution and By-Laws; Wm. H. Kenerson, Local Sections; Geo. F. Perkins, representing Professional Divisions; Secretary Calvin W. Rice; and Assistant Secretaries Wm. E. Bullock and Ernest Hartford. In response to the general invitation to attend Council meetings the following committeemen were present: S. B. Ely, and J. H. Herron, Local Sections Committee; C. E. Gorton, F. W. Dean, James Partington, F. R. Low, C. E. Bronson, C. W. Obert, Boiler Code Committee; Elmer Smith, and A. S. Kellogg, Boston Section; and Harry S. Echternach, Safety Engineer of the Commonwealth of Pennsylvania, guest of the Boiler Code Committee.

The Standing Committees on Local Sections and on Boiler Code met on March 22 and transacted important business recorded elsewhere.

#### Constitution and By-Laws to be Revised

*Action on Constitution and By-Laws.* Chairman Harrington reported for his Committee that the laws under which the Society is operating are deficient in providing for many of the new activities and that furthermore the documents need a general revision to unify amendments made from time to time. The Council requested the Committee to present, at the Spring Meeting, a proposed revision of the Constitution and By-Laws in accordance with article C 57. Any members of the Society having suggestions are invited to send them to the Secretary.

*Annual Meeting Plan Changed.* On the recommendation of the Meetings and Program Committee a change is being made in the By-Laws to enable the Annual Meeting, after the election of officers, which must be held in the City of New York, to be adjourned to any other place. This will give more scope to the Spring Meeting which, under the new plan, can always be held in the South or West, the East being taken care of by the Annual Meeting.

#### Code for Boiler Locomotives Accepted

*Locomotive Boiler Code.* After three and a half years' work of the Sub-Committee the Council accepted and approved the report on Boilers for Locomotives, which puts into effect an important addition to the series of codes planned by the

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DETAILS OF
A.S.M.E. SPRING MEETING
will be found on pages 352-353
of Section One

EVENTS ARE SCHEDULED AT
McCook Field, Dayton, May 21
Congress Hotel, Chicago, May 23-6
Rock Island Arsenal, May 27-28

## GREAT LAKES MEETING PLANNED FOR JUNE 13-14

### Local Sections and Engineering Clubs to Unite in Regional Sessions

Under the auspices of the National Committee on Local Sections, what is to be called a Great Lakes Regional Meeting has been planned to take place on June 13–14, at Cleveland, Ohio, and the following Local Sections and Engineering Clubs in their respective cities have been invited to participate: Akron, Buffalo, Chicago, Cincinnati, Columbus, Detroit, Erie, Rochester, Toledo, Indianapolis, Ontario, Pittsburgh, and the Engineering Society of Dayton.

It will be recalled that the Society has already held one or two successful joint Local Section meetings, but nothing so pretentious as this forthcoming meeting has as yet been attempted.

There has long been a feeling that one general meeting of the Society a year other than the Annual Meeting is insufficient. Therefore, the Local Sections' Committee has been working to develop regional meetings of Local Sections, which have possibilities of being as representative and worth while as are Spring Meetings, promoting acquaintanceship and giving opportunities for interesting technical sessions.

## CHOICE OF F.A.E.S. DELEGATES TO FALL ON VOTING MEMBERS

Plans are under way for the regular Nominating Committee to make nominations annually to fill the vacancies on our Society's delegation on the American Engineering Council in the same way that the officers of the Society are nominated. This will be done simply by the regular Nominating Committee presenting to the Secretary, at the same time that it furnishes the regular ticket, a list of its candidates for the vacancies in the delegation; these will then be balloted on by the voting membership just as the regular officers are.

The Council feels that this procedure will give considerable standing to our Society's delegation on the Federation and that at the same time the election of our representatives will be conducted in the most democratic manner possible, the responsibility for the personnel of our delegation being placed entirely in the hands of the voting membership.

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## STEADY PROGRESS IN PROFESSIONAL DIVISION ACTIVITY

### Management, Forest Products, Ordnance and Fuels Divisions Now Well Under Way

It will be noted that the term "Professional Sections" is being changed to "Professional Divisions." This will avoid confusion with Local Sections, which are colloquially referred to as Sections.

#### Professor Breckenridge Honored by Professional Divisions

By unanimous vote of the Standing Committee on Professional Divisions, Prof. L. P. Breckenridge has been elected Vice-Chairman of the Standing Committee. He serves on this Committee by virtue of his chairmanship of the Fuels Division. Professor Breckenridge is widely known as an educator and as an expert on fuel and power subjects. He has been very active in the Professional Divisions from their inception. He is a member of the Committee on Superpower Survey.

#### Management Division's Executive Committee Has Regular Schedule

The Executive Committee of the Management Division has adopted a schedule of meeting the first Monday in each month except July and August.

At the April meeting of the Committee the program for the Management Session at the Spring Meeting was adopted. This will include a tentative report from the Joint Committee on Management Terminology, on which are coöperating the Industrial Relations Association of America, National Association of Cost Accountants, Society of Industrial Engineers, The American Institute of Accountants, and the Taylor Society.

The Division has been offered a number of papers on management topics, which the Committee will be glad to place at the disposal of the Local Sections, subject to the ability of the authors to meet any desired dates. Any members having constructive papers or subjects for Division activities are requested to communicate with the Division's Secretary, Mr. W. Herman Greul, 10 East 39th Street, New York City.

#### Forest Products Division Starts with 160 Members

The Council has now authorized the Forest Products Division, and the Organizing Committee, Mr. Thomas D. Perry, Chairman, will canvass the membership of the Division to elect the Executive Committee. The Division is to hold a Session at the Spring Meeting in Chicago and the organization will probably be effected there.

Phases of the subject to be included in the activities of the Division are Wood Preservation, Paper Pulp, Lumber Manufacture, Furniture, Management, Education, Vehicles and Musical Instruments.

### Ordnance Division Executive Committee Elected

As the result of the letter-ballot of this Division, conducted by the Organizing Committee, consisting of Major F. C. Bull, Mr. Ralph G. Macy, Major E. L. Sherwood, and Mr. F. E. Town, the following have been elected as the Executive Committee: Mr. Waldo H. Marshall, Chairman, Lt-Col. G. L. Wall, Major Wilford J. Hawkins, Major Fred J. Miller and Major E. L. Sherwood, Secretary.

The big coming event of the Division is the meeting to be held at Rock Island Arsenal immediately following the Spring Meeting. The technical program is in charge of the Ordnance Division. The Army Ordnance Association is participating and the official invitation for the meeting was issued by the Chief of Ordnance of the United States.

### Gas Power Division Executive Committee Elected

Van H. Manning, *Chairman*, Finley R. Porter, Lawrence B. Jackson, B. P. Flint and R. H. Burdick have been elected as the Executive Committee of the Division with W. D. Ennis as *Secretary*. The Division is planning no event for the Spring Meeting, but hopes to have a session at the 1921 Annual Meeting.

### Professional Divisions Developing Affiliate Members

An application form for Affiliates and a form of membership card have been adopted by the Standing Committee on Professional Divisions and are being printed.

Briefly, the requirements are that the applicant for affiliateship in any Division shall fill out a form similar to the form for membership in the Society proper, giving three members as references, and shall pay an annual fee of $10 for each Division which shall include a subscription to MECHANICAL ENGINEERING.

Any member of the Society may propose any one for this class of membership and the Secretary of the Society will be glad to provide the necessary forms.

## EACH LOCAL SECTION TO HAVE FUELS COMMITTEE

The formation of Fuels Committees under the auspices of each of the local sections of the Society has been undertaken by the Fuels Division. To each of the chairmen of the local sections was sent a letter in the form of a questionnaire signed by the members of the executive committee of the Division, also a communication from Prof. L. P. Breckenridge outlining some of the activities which could be undertaken by the local Fuels Committees. Before sending the above, permission was obtained from the Local Sections Committee of the Society. In the questionnaire the chairman was asked (1) to name the leading authorities on fuels in his section, (2) to give a list of the forthcoming meetings on fuel subjects, and (3) to recommend five members in the section who could constitute a local committee on fuels and assist in the program of the Fuels Division. To the Division's Committee on Membership has been assigned the task of aiding in the formation of these local committees. Among the activities which the local committees could undertake are the following: (*a*) Having fuel meetings each year in which local organizations could be asked to participate; (*b*) furnishing speakers, if desired, for the meetings of local organizations of engineers; (*c*) giving civic authorities help in stimulating fuel economy and informing the local press of facts about the elimination of unnecessary waste. Besides this the committees can be of service to the Division by (*d*) tabulating fuel facts and performances in its vicinity and sending them to the Committee on Information, also (*e*) by obtaining speakers for the fuel sessions at the Annual and Spring Meetings of the Society.

The Division expects to have a very interesting session at Chicago, and it earnestly hopes that there will be a large attendance of the members.

MANCIUS S. HUTTON,
*Secretary Fuels Division, A.S.M.E.*

## MATERIALS HANDLING DIVISION OUTLINES OBJECTS AND SCOPE

### Questionnaire Being Sent to Division Members to Assist in Committee Organization

The Aims and Organization Committee of the Materials Handling Division of the A.S.M.E. has recently submitted to the Executive Committee of the Division a report giving the objects of the division, the scope of its activities and an outline of how the problem is to be approached. Material handling, it is stated, is largely a mechanical-engineering problem divided into two parts: First, the consideration of the detailed design and operation of mechanical equipment for handling material, and, second, the economical and efficient application of this equipment in the arts and industries. The purpose of the Materials Handling Division is to organize, direct and promote these two objects. The report gives the following specific

#### Objects of the Division

*a* To coördinate and correlate existing data and information, to find the gaps in the knowledge so as to bridge them, and to render the sum total available to the greatest possible number;

*b* To develop the science and economies of material handling in conjunction with and in coöperation with all other logically associated organizations;

*c* To work toward standardization of methods and designs wherever feasible and possible with the belief that such standardization will reduce costs of handling materials;

*d* To promote actively the discussion of material handling in all its economic and engineering phases to the end that it may take its rightful place in future engineering thought and opinion;

*e* To point out the economic wastes of duplication of effort, of manual labor, and of undirected and unplanned material handling in all its phases;

*f* To aim to correlate the work of all engineers in material handling;

*g* To coöperate with other professional divisions of the Society or other associations and organizations;

*h* To initiate and aid research;

*i* To assist in solving national, state and community handling problems; and

*j* To establish an Information Division which would be prepared to furnish such information as a compendium of all devices now on the market, a list of references classified under material handling.

#### What is Material Handling?

The scope of the activities of the Division is defined as follows: Material handling in this Division is concerned only with what may be called the problems of secondary transportation of materials and commodities. It does not concern itself with the broad transportation problems of the common carriers, or the tributaries to common carriers, such as organized highway trucking systems, interurban freight lines, and so on. Material handling has to do with the multitudinous operations of "picking up and putting down" materials in process of production, and the handling problems of the linkages between common carriers and delivery to the user.

The objective in any material-handling problem is the reduction of costs. The Professional Division therefore, will approach the problem in general and will (1) make a survey of the existing industry to ascertain the present state of the art; (2) make studies for the improvement of machinery and equipment for the handling of materials; and (3) ascertain ways and means of reducing costs.

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## THE SECRETARY'S LETTER

### Individual Responsibility, Economy, Thrift and Industry Will Alone Bring Prosperity

The conspicuous characteristic of the inaugural address of the President of the United States was the announcement that success depends upon the efforts of each individual.

Since determining to discuss in this letter the peculiar opportunity and responsibility of the engineer, of all citizens, due to his special fitness, I have chanced to read an address by Dr. Gunsaulus, former President of the Armour Institute of Technology of Chicago. The occasion was a comparatively short time before his recent untimely death. I had known of him all my life, but almost entirely as a minister of the gospel and lecturer. Due to this I am the more impressed with his appeal to the engineer "for handicraft" as "a plea for patriotism"—"It is a defense . . . against flaccid, brainless, horn-blowing Americanism."

Mr. Hoover has recently stated that the lower living standards in the Old World accentuated and enforced by the war can only result in lowered manufacturing costs in all articles with which we are to compete in the world's markets. Already Germany has underbid American locomotive builders by $3000 each on engines for Java and Sumatra. We think we have been going through trying times, but we may be sure that the future will continue to present trying situations.

It has been the habit of mind of all citizens, including engineers, to believe that their difficulties are going to be solved by the new administration rather than by themselves; to defer even thinking—that somehow, as by magic, Mr. Harding and his cabinet, even with a Hoover, are going to bring prosperity, and that all we have to do is to wait and it will come to us!

Gladstone asked an audience on one occasion to define an empire, and then immediately answered his own question by saying, "An empire is made by the people."

The first thing needed is personal economy—not of the father alone, but of the mother, son, and daughter—accompanied by greater individual industry. Each person must consume less and produce relatively more. In this deflation period money is going to be relatively more dear. Examples of economy, thrift and industry must be set by the engineers as executives if they are to be caught by working people generally.

We engineers must make it possible for the Government to economize so as to reduce taxes. We can only do this by giving the Government the benefit of our special training, not as office seekers but as servants of the people, and in the most helpful and at the same time unpretentious manner. We have made a most flattering success of our movement for a department of Public Works: let us follow that up with other thoughtful measures.

CALVIN W. RICE, *Secretary.*

## BOSTON ENGINEERS HAVE TWELFTH ANNUAL DINNER

The Twelfth Annual Dinner of the Engineers of Boston was held at the City Club on March 9, bringing together the A.S.M.E. Section with the other engineering societies of Boston. Lewis E. Moore, bridge engineer of the State Department of Public Works, was toastmaster and Edward J. Mehren, editor of the *Engineering News-Record*, whose topic was An Engineer's View of the Economic Conditions in Europe, told of his recent trip abroad. Rev. McIlyar H. Lichliter, of Newtonville, Mass., discussed certain sociological tendencies under the topic The Vaudeville Mind. The possibilities of aerial photography in engineering work were presented by stereopticon views through the courtesy of the American Air Service Corp. Charles L. Newcomb officially represented the Society.

## CENTRAL PA. SECTION TO HAVE BIG MAY MEETING

The Central Pennsylvania Section of the A.S.M.E. will hold its Spring Meeting on May 21 at State College, Pa., with headquarters at the University Club. There will be two sessions—at 10 a.m. and 1.30 p.m.—and the speakers will include Dr. Ira N. Hollis to speak on The Engineer's Duty in Eliminating the National Waste, Dean R. L. Sackett of the Pennsylvania State College whose address will be on New Opportunities for the Engineer, and Major Fred J. Miller who will speak on The Engineer's New Duties.

This meeting has been set for May 21 to enable members on their way to Chicago to attend. Those leaving Philadelphia or New York on the evening of the 20th, may reach State College via Tyrone by 9.30 the next morning, and may leave the latter place at 4 p.m. in the afternoon, arriving at Chicago on the following morning of May 22.

The program will include a description and inspection of the new $150,000 mechanical engineering laboratory and of the heat-transmission work at the college's thermal testing plant. There will be a review of investigations now in progress or proposed in Central Pennsylvania at the Professional Session. Lunch will be served at the University Club at 12.30 and following the afternoon session members may attend the baseball game between the University of Detroit and Penn State. For further particulars regarding train connections and program, address Major J. W. Henszey, Chairman, Program Committee, State College, Pa.

## COUNCIL IS GUEST OF BOSTON SECTION

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Boiler Code Committee. The Sub-Committee was accorded the thanks and appreciation of the Council for its painstaking work. The Boiler Code Committee also reported interpretations Nos. 324, 328, 329, 331, 332, 333, 334, 338, 339, 340 and 341, which were approved and ordered published in MECHANICAL ENGINEERING as heretofore.

*Professional Divisions.* To avoid confusion with the term "sections," which is often applied to Local Sections, the machinery was put in motion to change the term "Professional Sections" to "Profession Divisions." This entails a change in the By-Laws only and can be completed at the next meeting of the Council.

On the recommendation of Mr. Thomas D. Perry, supported by 143 members of the Society, the Council accepted a petition for a Forest Products Division. It will be recalled that a Committee on Woodworking conducted a successful session at the last Annual Meeting and the new Division is the outcome. The Division plans to conduct a session at the forthcoming Spring Meeting in Chicago.

The Management Division reported a joint committee on Management Nomenclature with the following societies participating: The Taylor Society, the Society of Industrial Engineers, The American Industrial Relations Association, The National Association of Cost Accountants, and The American Institute of Accountants.

*Local Sections.* The former Washington State Section was divided into the Western Washington Section and the Inland Empire Section. A full account of these activities appear under "Local Sections."

*Relations with Colleges.* The Committee on this activity was asked to call together the members of the Student Branches from the other national societies to consider a plan of uniform action with the colleges.

*Committee Appointments.* D. M. Ferris, Wm. H. Kenerson, M. L. Cooke, H. G. Tyler and Roger M. Freeman, were appointed as a Committee on Relations between Junior and Student Members; and E. N. Trump, F. A. Halsey, Albert W. Smith, Ambrose Swasey and F. G. Tallman as a committee to prepare the biography of John A. Sweet.

Past-President D. S. Jacobus was reappointed as one of the Society's representatives on the Engineering Division of the National Research Council.

Carl B. Auel, was appointed on the Safety Code for Mechanical Transmission of Power, Stanley G. Flagg, Jr., as one of the Society's representatives on American Engineering Standards Committee, and Frank L. Fairbanks as A.S.M.E. representative on the New Advisory Board of the American Bureau of Welding.

*American Engineering Council.* On the recommendation of the Chairman of the Society's delegation, Mr. L. P. Alford, it was voted that hereafter the vacancies be filled by election by the voting membership in the same manner that the regular officers of the Society are elected. An article on this subject appears elsewhere in this issue.

*Council to Visit Mobile.* The Council adjourned to meet at the Battle House, Mobile, Ala., on Friday, April 22, at 8 a.m.

CALVIN W. RICE, *Secretary.*

## HOW THE FINANCE COMMITTEE HANDLES ITS MANY PROBLEMS

### Cost of Publications and Joint Obligations Call for Two Budgets Yearly

In the normal times which used to prevail, the budget of estimated income and expenditures need be considered only once a year, fairly accurate forecasts being then possible. But with present conditions, to be safe, practically two budgets have to be made a year, each requiring considerable thought on the part of the committees in charge of the several activities, then of the Finance Committee, and finally of the Council.

It might be interesting to members to know just how these budgets are made up, that they may judge how much responsibility rests upon the committees that all may share in it, and that those especially familiar with the handling of financial matters may take the initiative—always welcomed, especially so now—in offering suggestions.

In the first place, with the still prevailing high manufacturing costs of all printing (and the notice that there may be a 12 per cent increase on May 1), it requires serious thought to make "ends meet" and the chief concern in making up the budget is how *best* to distribute the available money, for at current costs there is far less money available than committees could use advantageously.

An additional burden this year has been the estimating of the income. Every member knows that no small part of his returns from the Society are made possible by the advertising activities, and it is also common knowledge that the present business depression has been accompanied by general curtailment of advertising. No part of the income from advertising is profit to any one, nor is it used for the running of the Society. It is devoted solely to the development of MECHANICAL ENGINEERING to make it invaluable to every mechanical engineer.

Expenses that must be incurred each year are those to secure the income. It costs money to collect the dues, to put through new members, to publish the Transactions and Year Book given each member.

The Society has assumed a number of obligations jointly with the other societies in the Engineering Societies Building. These are the maintenance of the building itself, the Library, the American Engineering Standards Committee, and recently the Federated American Engineering Societies. All these activities are for the good of the whole profession, as well as for the benefit of our own membership.

The publications—the text of MECHANICAL ENGINEERING, the Transactions, the Year Book—are important obligations, as are also the General Meetings and the Local and Professional Sections. All of these find their usefulness, and the consensus of opinion at the meeting of the Local Section delegates at the last Annual Meeting was that they should be maintained—though necessarily restricted slightly so as to insure current income taking care of current expenditures.

A study of the activities the Society undertakes gives an indication of how far the resources have to go, and enable members to judge the problems which confront those who have the responsibility of deciding how best to distribute the Society's income:

## MATERIALS HANDLING DIVISION OUTLINES OBJECTS AND SCOPE

(*Continued from page 54*)

In subdividing the committee activities prime consideration will be given to the two sets of problems in the field of the Materials Handling Division: (1) the technical problems of the industries, and (2) the commercial fields of material-handling machinery. These two main divisions may be subdivided in many different ways, depending on the problem involved. By appointment of committees functioning under the executive committee of the Division and coordinated with the general committee, a very flexible plan of organization is afforded which may be enlarged or contracted to meet conditions.

To assist in the organization of committees a questionnaire in the form of a classification list is being sent to the members of the Division, giving them an opportunity to indicate in what particular features of the material-handling problem they are interested. Only such subcommittees on industry, application and design of equipment as are warranted by the interest and support of the Division membership will be formed.

## CHOICE OF F.A.E.S. DELEGATES TO FALL ON VOTING MEMBERS

(*Continued from page 53*)

The Society has one representative for every thousand members, and by January 1 next year, it is estimated that our delegation will number fifteen. The representatives serve for two years, one-half retiring each year.

Provision is being made for the President-elect of the Society to be a member of the delegation, and in the second year of his service for him to be its chairman. A vice-chairman will also be nominated each year, and the delegation will elect its own secretary, who will coöperate closely with the Secretary of the Society.

## ENGINEERING FOUNDATION ISSUES ANNUAL REPORT

The annual report of the sixth year of Engineering Foundation reviews the progress of the work in hand and outlines the projects in view. The Foundation has continued to work in close coöperation with the Division of Engineering of the National Research Council. One of the chief studies during the past year has been that on the Fatigue Phenomena of Metals carried on under the direction of Prof. H. F. Moore at the Engineering Experiment Station of the University of Illinois. A full account of this work and other activities of the Foundation will be found in the complete report, copies of which may be obtained from Alfred D. Flinn, secretary of the Foundation, 29 West 39th Street, New York City.

## Recent Section Meetings

*Regional Meeting in the South, Atlanta-Birmingham-New Orleans.* April 22. Joint meeting at Mobile, Ala., attended by A.S.M.E. Council and the Local Sections Committee. National officers also visited Birmingham and Atlanta en route to Mobile, and New Orleans and Cincinnati Sections on return trip.

*Akron.* April 27. Joint meeting with the Engineering Society of Akron. Dr. D. S. Jacobus of the Babcock & Wilcox Co. addressed meeting.

*Atlanta.* March 29. Subject: Designs of Super-Power Plants, by John A. Stevens, of Lowell, Mass.

*Baltimore.* March 31. Subject: Development of Central Stations, by George A. Orrok, of N.Y.C.

*Birmingham.* April 1. Subjects: Designs of Super-Power Plants, by John A. Stevens, of Lowell, Mass.; Early Days in the By-Product Plant Operation, by F. Tschudy, of the By-Product Plant, Fairfield, Ala.

*Boston.* March 12. Annual dinner of Boston Engineers. See special account page 54 of this section.

March 23. Joint meeting of A.S.M.E. of Boston and Worcester, A.I.E.E. of Boston and Harvard Engineering Society. Subject: Internal-Combustion Engines, by Dr. Charles E. Lucke, of Columbia University, N.Y.C. President Carman also spoke at this meeting and A.S.M.E. Council and Committee on Local Sections attended in a body.

*Cincinnati.* March 17. Joint meeting with the Engineer's Club of Cincinnati. Subject: The Manufacture of Armco Ingot Iron and Special Steel Sheets by T. W. Jenkins. This address was illustrated with motion pictures.

March 22. A meeting for the discussion of the bill before the Senate regarding the licensing of mechanical and electrical engineers.

April 21. Joint meeting with the Engineer's Club of Cincinnati. Subject: Rehabilitation of Men, by John T. Faig, President Ohio Mechanics Institute.

*Cleveland.* April 5. Subject: Thread-Milling Machines, by E. J. Lees, President. Lees-Bradner Co., Cleveland, Ohio.

*Colorado.* April 29. Meeting at the Metropole Hotel, Denver, Colo.

*Columbus.* March 11. At the Southern Hotel, Columbus, Ohio. Subject: Automobile Fuels, by Prof. C. A. Norman, of Ohio State University.

March 14. At the Chittenden Hotel, Columbus, Ohio, in honor of Ex-President Hollis.

April 8. At the Engineer's Club, Columbus, Ohio, Subject: Combustion and Boiler Operation, by E. G. Bailey, of the Bailey Meter Co., Cleveland, Ohio.

*Connecticut State.*

*Bridgeport Branch.* February 17. Subject: Measuring and Manufacturing to One-Millionth of an Inch, by W. H. Weingar.

March 24. Fuel as the Engineer Burns It, by F. F. Uehling, combustion engineer, Uehling Instrument Co., N.Y.C. The Purchasing Agent's Problem, by W. T. Birney, P. A. Winchester Repeating Arms Co., New Haven, Conn. The Operator's Viewpoint, by G. C. Squier, representing George E. Warren Co., miners. The Railroads and the Coal Pools, by Dr. Henry M. Payne, Tidewater Coal Exchange, N.Y.C.

*Hartford Branch.* April 11. Subject: The Corrosion of Metal Surfaces. Joint meeting with the Connecticut Valley Section of the American Chemical Society.

*Meriden Branch.* April 15. Subject: Electric Furnaces, by H. A. Winne, of the General Electric Co., Schenectady, N. Y.

*Eastern New York.* (Schenectady, N. Y.) March 25. At Edison Club Hall. Subject: Design and Application of Hydraulic Machinery, by Lewis F. Moody, of the I. P. Morris Co. Motion pictures of the Development at Niagara Falls and lantern slides were shown.

April 29. At Edison Club Hall, Schenectady, N. Y.

*Houston.* March 25. Standardization of Drill-Pipe Threads, by F. L. Scott, of the Hughes Tool Co. Comparison of Efficiency of Various Types of Condensers, by A. E. Brewer.

*Los Angeles.* March 19. Field Day to inspect the Standard Oil Co. Plant at El Segundo. Dinner was held at one of the beach towns, and in the evening there was a talk on the El Segundo Plant. Motion pictures were shown describing the petroleum industry.

*Metropolitan.* (New York City.) April 1. Joint meeting of the Metropolitan Student Branches and Metropolitan Section and Division on Management. Caliper Yourself, by G. Kingdon Parsons, Consulting Engineer; Super-Power as an Answer to National Power Policy, by W. S. Murray, consulting engineer; The Opportunity of the Engineer in Management, by Dexter S. Kimball, Cornell University; Types of Industrial Organizations, by C. E. Knoeppel, industrial engineer; Unsolved Management Problems, by L. W. Wallace, Secretary, American Engineering Council, and President of the Society of Industrial Engineers.

April 22. Joint meeting with the A.I.E.E. Subject: Engineering Education, with Professor Comfort A. Adams in charge of the meeting.

*Mid-Continent.* (Tulsa, Okla.) April 28 and 29. Joint meeting of the Chemical and Engineering Societies.

*Milwaukee.* March 16. Subject: Coals of the U. S.: Their Composition and Physical Characteristics, by Henry Kreisinger, fuel engineer, in charge of fuel investigation, Bureau of Mines.

*Minnesota.* April 5. At the Engineering Auditorium, University of Minnesota. Subject: Modern Hydraulic Turbines of American Design, by Arnold Pfau.

*Ontario.* March 18. Joint meeting with the American Society for Steel Treating. Subject: The Hump Method for Heat Treatment of Steel, by G. W. Tall, Jr., of Leeds & Northrup Co. Philadelphia, Pa.

April 1. Subject: The Manufacture of Armco Ingot Iron and Special Steel Sheets, by T. W. Jenkins, American Rolling Mill Co., Middleton, Ohio.

*Philadelphia.* April 1. Students' Night. The speakers were Wm. D. Disston, Hugo Bilgram, C. N. Lauer, W. C. L. Eglin and J. G. Strachan.

April 26. Subject The Spirit of Management an Attitude of Mind, by Edward G. Budd.

*Providence.* April 12. The Textile Professional Section of the A.S.M.E. with the Providence Engineering Society and the Providence Section A.S.M.E. met at the Club Rooms of the Providence Engineering Society.

*Rochester.* April 11. Dinner and joint meeting with the Rochester Chamber of Commerce and other engineering societies of Rochester. Subject: The Development of Modern Industry, by Dean Dexter S. Kimball, of Cornell University.

*St. Louis.* April 1. Joint meeting with the Associated Engineering Societies of St. Louis. Subject: A Trip to Dayton, Ohio, and a Visit to the National Cash Register Factory, by E. D. Smith, of the National Cash Register Co., Dayton, Ohio. Moving pictures accompanied this address.

April 29. At the American Hotel. Subject: Powdered Fuel, by H. I. Gentine, of the American Atomized Fuel Co.

## Coming Section Meetings

**Great Lakes Regional Meeting—June 13 and 14**

Local sections and engineering clubs in the following cities have been invited to participate in this meeting: Akron, Buffalo, Chicago, Cincinnati, Cleveland, Columbus, Detroit, Erie, Rochester, Toledo, Indianapolis, Ontario, Pittsburgh, and the Engineering Society of Dayton. Headquarters Hotel Statler, Cleveland, in rooms of Cleveland Engineering Society.

*Atlanta.*

May 21. At the Gas & Electric Building, Atlanta, Ga. Joint meeting with the local section A.I.E.E. Subject: Hydroelectric Power Plants, by C. G. Adsit, of the Georgia Railway and Power Co.

*Baltimore.*

May 5. Joint meeting with the Engineers Club of Baltimore. Speaker to be Frank B. Gilbreth, of Montclair, N. J.

*Birmingham.*

May 18. At the Southern Club, Birmingham, Ala. Annual Business Meeting.

*Connecticut State.*

*Hartford.*

May 9. Get-Together Dinner at the City Club, Hartford, Conn. Subject: Corrosion of Metal Surfaces, by Dr. A. S. Cushman, Dir. of Inst. of Industrial Research, Washington, D. C.

*Detroit.*

May 6 or 20. Joint meeting with the Detroit Engineering Society, and the A.I.E.E. The speakers will be Messrs. Clark and Galusha.

May 13 or 27. Joint meeting with the Detroit Chapter A.I.E.E.

*Eastern New York.*

May 19. At Edison Club, Schenectady, N. Y. Subject: Synchronous Motors, by A. R. Stevensen, of the General Electric Co.

*Mid-Continent.*

Weekly luncheons every Friday noon, at Tea Cup Inn, Tulsa, Okla.

*Philadelphia.*

May 20. At Hotel Adelphia Roof. Annual Section's Dinner. Vaudeville entertainment, several short talks and announcement of election of officers.

*Rochester.*

May 5. Joint dinner of the professional engineers of Rochester, at the Powers Hotel. The speaker is to be Calvert Townley.

*San Francisco.*

May 19. Subject: The Handling and Refining of Sugar, by George M. Rolph, of the California Hawaiian Sugar Co.

*San Francisco.* March 17. Joint meeting with the A.I.E.E. The Present Status of Steam Electric Generation in Oil-Fired Plants of the Pacific Coast, by Robert Sibley, Editor, *Journal of Electricity and Western Industry;* Efficient Operation of Oil-Fired Steam Electric Stations, by C. H. Delaney, Pacific Gas & Electric Co. Motion pictures, depicting the conditions which necessitate the maintenance of stand-by steam plants for hydroelectric service.

April 14. Subject: The Gas-Fired Steam Plant of the San Joaquin Light Power Co., by A. Y. Meudell of the San Joaquin Light Power Co.

*Tri-Cities.* April 14. At the Chamber of Commerce, Clinton, Iowa. Subject: Woodwork, by Sern Madsen, of the Curtis Co., Inc.

*Washington, D. C.* March 31. The Application of the Recuperator to Gun Carriages, Including Theory and Principles of Construction, by Major J. B. Rose, Ordnance Dept., U. S. A.; Design and Construction of the 16-in. Disappearing Gun Carriage from an Engineer's Standpoint, by Major G. M. Barnes, Ordnance Dept., U. S. A.; The Work of the Local Sections Committee, by Charles Penrose, of Philadelphia, Pa.

*Worcester.* March 11. At Crompton & Knowles Loom Works, Weave Shop.

March 23. At Harvard Union, Cambridge, Mass. See Boston meeting, March 23.

March 24. Luncheon at the Bancroft Hotel, Worcester, in honor of President E. S. Carman.

## Personals

The Engineering Business Exchange conducted by CHARLES WHITING BAKER announces the opening of a Southeastern Branch with offices in Washington, D. C., which will be under the direction of MARSHALL O. LEIGHTON, who during the past three years has rendered valuable service to the engineering profession as the chairman of the National Service Committee of Engineering Council. Associated with Mr. Leighton in carrying on the Exchange will be A. C. OLIPHANT, who has also been active in the work of the National Service Committee. The Southeastern Branch will coöperate with the main office of the Exchange in New York City but will have especial charge of the territory from Maryland to Alabama, inclusive. The former work of Messrs. Leighton and Oliphant in the Washington office of Engineering Council will be transferred to L. W. Wallace, secretary of the Federated American Engineering Societies, now occupying headquarters in Washington.

JOHN T. SHARP, Jr., superintendent of the Canton Electric Light and Water Works, has been made manager of the newly organized Winona Public Utility Plant. This plant is a reorganization of the Winona Light, Ice, Water and Sewerage Company which the City of Winona has purchased and remodeled so as to provide water and light services for the entire city.

GARDNER C. DERRY, formerly district manager of the power apparatus department of the New York office of the B. F. Sturtevant Company, is now located at the factory home office at Hyde Park, Boston, taking charge of the fuel economizer and mechanical draft department.

The name of the Durant Building Corporation, Detroit, Mich., of which C. C. WILCOX is chief engineer, has been changed to the General Motors Building Corporation.

CHARLES EISLER, consulting engineer of Newark, N. J., has purchased the assets of the National Machine & Tool Co. of Newark, N. J. and reorganized it under the firm name of Charles Eisler Engineering Company, which will manufacture gear testing machines and incandescent lamp machinery.

CLARENCE M. DAVISON, until recently manager of the service station, Alsop Motor Corporation, Richmond, Va., is now general superintendent of the Poole Engineering & Machine Company, Baltimore, Md.

DR. WILLIAM N. BEST, retiring president of W. N. Best, Inc., which has been sold to the W. N. Best Furnace & Burner Corporation, recently incorporated under the laws of New York, will act as consulting engineer for the new company, in which he has a large financial interest.

ALPHONSO TAURMAN has severed his connection with the Virginia Railway & Power Co. and is now with the Birmingham Railway, Light & Power Co., Birmingham, Ala., as superintendent of equipment.

Announcement is made that the firm of Arison, Goodwin & Knapp, industrial engineers, Chicago, Ill., is dissolved on the retirement of L. G. KNAPP. The business will be carried on with COL. EDGAR E. ARISON and L. Reeves Goodwin as the senior members under the firm name of Arison, Goodwin & Associates.

ALBERT J. ROMER, formerly mechanical engineer for the New Departure Manufacturing Company, Bristol, Conn., and more recently chief engineer and designer for the Northway passenger car of the Northway Motors Corporation, Natick and Boston, Mass., has formed the Romer Motors Corporation, Boston, Mass. A factory for the manufacture of passenger cars will be erected at Danvers, Mass.

G. S. MARTINDALE has severed his connections as resident engineer for The General Motors Corporation, St. Louis, Missouri, to become works engineer for The Champion Coated Paper Company, Hamilton, Ohio.

W. K. KIRBY, chief engineer of construction for James Stewart & Co., has recently returned from Paris and is now located in New York City.

E. T. SPIDY has resigned his position as production engineer, C. P. Ry. Angus Shops, to take a position as assistant superintendent of The Dominion Engineering Works, Montreal, Canada.

C. H. PETERSON, formerly with the Iron Mountain Company, Chicago, Ill., is now vice-president and general manager of The Viking Corporation, manufacturers of automatic fire protection apparatus, Hastings, Mich.

ALBERT H. ISRAEL, formerly works manager of the American Mustard Company, Inc., Brooklyn, is now general manager of the Mustard Products, Inc., Brooklyn, N. Y.

LOUIS T. KLAUDER has resigned his position as construction engineer for the Philadelphia Rapid Transit Company and will enter the consulting engineering field, specializing in plant design and construction.

OTTOMAR H. HENSCHEL has resigned his position as associate editor and consulting engineer on the staff of *Power Plant Engineering*, Chicago, Ill., to become associated with Deane S. Holt of Milwaukee in The Holt Power Equipment Company.

Among the appointments to the College of Engineering of the University of Illinois for the year 1920–1921 are the following A.S.M.E. members: JOSEPH A. POLSON, associate professor of steam engineering; CLARENCE W. HAM, associate professor of machine design; ARTHUR H. AAGAARD and H. O. CROFT, instructors in mechanical engineering; HAROLD N. PARKINSON, instructor in railway mechanical engineering; and JEAN P. LEINROTH, instructor in theoretical and applied mechanics.

C. LEE STRAUB, formerly with the Catton Neill Company, Honolulu, is now with Stephens & Company, San Francisco, Cal.

FREDERICK E. BANKWITZ, who was formerly with Fletcher-Thompson, Inc., Bridgeport, Conn., is now with the Habirshaw Electric Cable Company, Yonkers, N. Y.

W. D. MANN is now connected with the Pneumercator Company, New York, N. Y. He was formerly combustion engineer in the engineering department of the Petroleum Heat and Power Company, Boston, Mass.

N. K. ALTHOUSE, formerly assistant engineer of the Braden Copper Company, has become associated with the Homestead Valve Manufacturing Company, New York, as sales engineer.

## Necrology[1]

ELMER A. BEAMAN, until recently treasurer and general manager of the Beaman & Smith Co., machinists, Providence, R. I., died on January 4, 1921. Mr. Beaman was born in Worcester, Mass., on September 2, 1846. He was a Civil War veteran, having fought with the 23d Regiment, N. Y. State National Guard, in the battle of Gettysburg, and later was with the 42d Regiment, Massachusetts Volunteer Militia. He was a member of the Providence Chamber of Commerce, the National Metal Trades Association, the Prescott Post of the G. A. R., and was a 32d degree Mason. He became a member of our Society in 1891.

CHARLES W. CADE, factory manager of the McKinney Manufacturing Co., Pittsburgh, Pa., died on January 22, 1921. Mr. Cade was born in Cambridge, Mass., on August 1, 1879. He was a graduate of the Massachusetts Institute of Technology, class of 1901. Mr. Cade became a member of the Society in 1914. He also belonged to the Western Society of Engineers.

WILLIAM DUNDERDALE FORBES, formerly president of the W. D. Forbes Co., engineers, New London, Conn., died on February 17, 1921. Mr. Forbes was born in Perth Amboy, N. J., on July 10, 1852. He received his early education in the public schools of Buffalo and later received his M.E. degree from the Polytechnic Institute of Zurich, Switzerland. He also took post-graduate work at the Polytechnic in Dresden, Germany. Mr. Forbes was a member of the council of the Society of Naval Architects and Marine Engineers, an associate member of the American Society of Naval Engineers and a life member of our Society, since 1886.

FREDERICK W. HOLLMANN, master mechanic, Bethlehem Steel Co., Sparrows Point, Md., died in January 1921. Mr. Hollmann was born in New York City in July 1883. He was educated in the public schools of the city and Columbia University, from which he received his M.E. degree in 1905. He became a junior member of the Society in 1907 and attained full membership in 1914.

EDGAR RAYMOND PIPER, head of the department of drawing and design, Wentworth Institute, Boston, Mass., died on December 20, 1920. Mr. Piper was born in Boston, Mass., on August 4, 1872. He was a graduate of George Washington University. He became a member of the Society in 1920. He was also a member of the Washington Society of Engineers.

CECIL P. POOLE, city mechanical engineer of Atlanta, Ga., died on February 23, 1921. Mr. Poole was born in Elizabeth City, N. C., in October 1865. He was educated at Johns Hopkins and Cornell University. He was a Fellow of the American Institute of Electrical Engineers and a member of the Society of Automotive Engineers and also of the American Society for Testing Materials. He became a member of our Society in 1909.

WILLIAM H. VAN DERVOORT, prominent war-munitions manufacturer and president of Root & Van Dervoort Engineering Co., East Moline, Ill., died on February 25, 1921. Mr. Van Dervoort was born on February 28, 1869, in Ypsilanti, Mich. He was a graduate of Michigan Agricultural College and a post-graduate of Cornell University. He was a member of the Munitions Standards Board during the war and later was appointed by President Wilson to the War Labor Board. At the close of the war he was one of a commission of five chosen by the National Industrial Conference Board to go to study industrial conditions in Europe. He became a member of the Society in 1914.

[1] For details of the professional careers of deceased members, see necrology section of the forthcoming issue of the Transactions of the Society.

# EMPLOYMENT SERVICE BULLETIN

Conducted by the Employment Service of The Federated American Engineering Societies, 29 West 39th Street, New York

## POSITIONS AVAILABLE

*Stamps should be enclosed for transmittal of applications to advertisers: non-members must accompany applications with a letter of reference or introduction from a member; such reference letter will be filed with the Society's records.*

MECHANICAL ENGINEER to develop and improve labor-saving machinery. Location New York City. X-40.

EXCELLENT OPPORTUNITY offered in Shanghai, China, for thoroughly experienced designing erecting power-plant engineer to handle well-known equipment for established export organization able to finance any installation. Willing to give responsible capable engineer good salary and opportunity to secure up to twenty-thousand dollar interest partnership in firm. Only high-grade financially able man considered. Give detailed experience references first letter. All confidential. X-142.

AMBITIOUS YOUNG MEN, ten, for salesman's training course with company manufacturing pumps. Must have vision enough to take full advantage of an extensive shop and office training and must be capable of development into high-grade representatives. Engineering degrees required. Application by letter. X-165.

DESIGNING ENGINEER on automatic and labor-saving machinery. Man with inventive turn of mind and resourceful. Location Rochester, N. Y. X-166.

ENGINEER familiar with designing, testing and production of machine tools such as milling cutters, drills, reamers, counterbores, spot facers, etc. Location Indiana. X-265.

ENGINEER experienced in microscopy, photography, physics, and chemistry for research work in laboratory of large rubber company. Location New York City. X-269.

MECHANICAL ENGINEER familiar with power-plant equipment and operation as assistant general sales manager with established manufacturer of power-plant specialties, condensers, etc. Sales experience and ability to grasp details an asset. State where graduated, course, experience, age and salary expected. Good opportunity for right man. Location Pa. X-292.

POWER-PLANT ENGINEER for executive and sales work with company manfuacturing water purification apparatus. Should have at least 2 years' experience. State age, education and experience. Location New York City. X-296.

STRUCTURAL STEEL DRAFTSMAN experienced in mill, bridge and public buildings of all kinds. Location New Jersey. X-301.

FACTORY SUPERINTENDENT for concern manufacturing food products. Location New Jersey. X-302.

MECHANICAL ENGINEER assigning work in boiler shop. Familiar with boiler construction and shop for refinery. Age 30. Location New Jersey. X-305.

ENGINEER with rubber experience and especially rubber compounds; to be permanently located in China. Must be good executive. X-309.

ELECTRICAL or MECHANICAL ENGINEER, technical graduate with 2 or 3 years' practical experience in power-station, substation, transmission and distribution work. The work to consist largely in analyzing construction and operation costs, preparation of contracts and estimates for future work and preparation of special reports. Give detail of experience, references and salary expected in first letter. Location New York City. X-316.

UPERINTENDENT for shops, wanted by Philadelphia plant building machinery, employing about 100 men. Must be graduate mechanical engineer, protestant, 30 to 40 years old, of proven ability and with practical experience covering shop management, production, planning, improved labor-saving and manufacturing methods, and capable of increasing product and decreasing costs. Give full particulars as to education and experience. State salary desired and furnish references. X-321.

SUPERINTENDENT of foundry laboratory in large University in Middle West. Age about 28 or 30. College training desirable, but not required. Applicant must understand modern methods of foundry management, production and operation. Excellent opportunity for ambitious and competent man who wishes to engage in teaching and research work. Position open September 1, 1921. Location Illinois. X-329.

ASSISTANT SUPERINTENDENT in forge laboratory in large University in Middle West. Applicant must be familiar with modern methods of heat treatment of steel and with forge-shop management. Age not over 28 or 30. College training desirable but not required. Position open September 1, 1921. Good opportunity for young man wishing to enter profession of teaching. Location Ill. X-330.

GENERAL FOREMAN, high class, clean-cut, competent for old, established factory manufacturing parts comparable to high-class automobile work. Give full experience references, general description of self, small recent photo and starting salary. Location Michigan. X-331.

ENGINEER with paper-making machinery experience. Must have been machine-shop foreman, and good executive; also experienced in repairing machinery. Location Brooklyn, N. Y. X-333.

CHIEF DRAFTSMAN under age of 45. Experienced in electrical, civil and mechanical design for power plants, steel structures and railways, to take charge of draftsmen in engineering office. Must be diplomatic and able to supervise force and get results. Location Middle West. X-340.

SALES ENGINEERS with demonstrated selling ability, to sell elevator guide-rail lubricator. Experience in building supply or power-plant specialty lines desirable. Long residence in city where they intend to work would be helpful. Men 25–35 would be most suitable. Territory open. Chicago, Phialdelphia, Detroit and Cleveland. X-348.

ASPHALT-ROOFING SALESMAN FOR FOREIGN SERVICE. Men with broad practical experience both in selling and application work. X-352.

YOUNG MAN, American, age 25 to 30 years; single preferred. Must travel. Prefer graduate engineering college. Must have shop and drafting-room experience on machine tools, jigs, fixtures, special machinery; experimental experience preferred. This is salesman engineer's job. Must be able to talk and write; possess good health; be neat in appearance, and have pleasing personality. Would be placed in engineering sales dept. for 3 months' training—and then would be required to devote about one-half time on road, and other half would be spent in office working out ideas of application. X-353.

SUPERINTENDENT to have charge of factory and foundry. Must be man of experience. Board of Directors (in order to secure men who will devote whole-hearted interest to business) have decided that superintendent must make investment of $5,000. Investment to consist of loan to company with agreement that stock may be taken if so desired within one year. Company has been in active business for over 30 years and has more than ample assets to protect loan. Compensation liberal and advancement based on achievement. Location Conn. X-355.

DRAFTSMAN familiar with design and construction of brass, iron and steel valves for steam and water. Location, East. X-361.

ENGINEER familiar with and experienced in designing Diesel or heavy-oil engines. Capable of doing layout work on drafting board in working out designs. Time will largely be spent in drafting room on such work. Location New York City. X-362.

OPERATING ENGINEER, experienced, practical; splendid opportunity for advancement. Must be experienced in operation of oil engines, preferably of the De LaVergne type. Should also have practical electrical power-house and refrigeration experience. Should be aggressive, responsible type of absolutely sober habits, whose personal integrity and mechanical training and experience can be verified, beyond question, from independent sources. Location Colombia, South America. X-372.

## MEN AVAILABLE

***The large number of requests to insert notices under this heading makes it necessary hereafter to limit the number of words in each notice to 20 so that as many members as possible may be accommodated.***

*Only members of the Society are listed in the published notices of this section. Copy for notices should be on hand by the 5th of the month preceding date of issue. The form of notice should be such that the initial words indicate the classification. Notices are not repeated in consecutive issues.*

*Notices for "Mechanical Engineering" are not acknowledged by personal letter; unless the applicant is otherwise advised, his notice will appear in the issue following its receipt.*

*Correspondence relating to replies to advertisements will be held in the Service Bureau for one month only.*

FACTORY ENGINEER or tool supervisor; 12 years' development of tools, special machinery and routing of product and department improvements, for quality production on quality basis. At present managing engineering company. Location preferred, South or West. SM-6198.

MECHANICAL ENGINEER, technical graduate; age 31; single. Desires permanent location with industry offering advancement; 5 years with railroad, motive-power department. Experienced in experimental work, shop practice, inspection, production, design, etc. Two years resident inspector, Engineering Corps. Business training and sales ability. Location immaterial. SM-6199.

INDUSTRIAL ENGINEERING EXECUTIVE, age 36; married; 15 years' development, manufacturing and research experience; practical mechanic and engineer, tool and drafting room experience, proven ability in processing and manufacturing. Small cast and sheet-metal specialties on quantity basis; 5 years in present position, best of references. Salary, $4,000. Location Philadelphia, New York or vicinity. SM-6200.

INDUSTRIAL-PLANT ENGINEER, age 34; married; American; specializing in layout of mechanical equipment and reorganizing for economic and efficiency standards. Especially familiar with brass and copper rolling-mill work; references. SM-6201.

MECHANICAL ENGINEER, technical graduate; age 36; 12 years' experience layout, installation, maintenance, mining machinery and power plants. Three years' design, layout, stock and product inspection, experimental work in manufacturing plant. Desires position as executive or assistant to executive. SM-6202.

MECHANICAL ENGINEER, age 36; 15 years' practical experience on design and construction of special and automatic machinery, tools and fixtures design, routing and planning production, systematizing; competent to take charge and get results; ability to develop inventions. Desires change; location immaterial. Pacific Coast considered. SM-6203.

MECHANICAL ENGINEERING specialist in development of automatic and labor-saving machinery, to reduce cost of manufacturing processes. Graduate Mass. Inst. of Tech. Five years' experience. Capable of directing experimental work. SM-6204.

MECHANICAL ENGINEER, graduate M. I. T.; specialized in steam and combustion engineering, experienced in design, construction and efficient operation of stationary power plants; desires responsible position with firm of consulting engineers, or as steam or combustion engineer of well-established concern. Minimum salary $200. SM-6205.

ASSISTANT TO WORKS MANAGER or similar executive. Mechanical engineering graduate, age 30; married; one year executive experience; 2 years' of machine design, plant layout and production work; one and half years' machine shop. Desire

place of larger responsibility and opportunity. Employed; references; salary $3,000. SM-6206.

MECHANICAL ENGINEER, college graduate; American; age 39; married. Field and office experience, drafting, supt. of construction, power-plant efficiency, testing, inspection. Marine engineer's ocean license. Mass. stationary license. Business course Alexander Hamilton Institute. New York or vicinity preferred. SM-6207.

TOOL DESIGNER, age 25; six years' broad and diversified experience in tool and jig design, wishes to make change. Location immaterial. SM 6208.

ENGINEER, age 32; wide experience in mechanical and civil lines for past 12 years, now employed as construction engineer, desires to get into engineer sales game. Mechanical education. From private to 2nd Lieut. A. E. F. Engineers. Moderate ideas on salary. SM-6209.

WORKS MANAGER, graduate mechanical engineer, successful record as factory executive with thorough training in drafting room, tool room, pattern shop, drop-forge shop and foundry practices. Age 30; married. Familiar with most modern industrial methods. SM-6210.

MECHANICAL ENGINEERING graduate; age 24; with experience in operation of small power plants, wishes to connect with firm engaged in design of power plants. Location immaterial. SM-6211.

SUPERINTENDENT or production engineer; 20 years' practical experience in building and designing machines and special tools; 8 years' connection with automobile manufacturer. Have held positions where intensive and accurate production was essential. At present employed, but desire change. Location immaterial. SM-6212.

RESEARCH ENGINEER, capable of scientific investigation or development of unperfected devices. Inventive and of wide designing experience; competent on any mechanical problem. Specialty, internal-combustion engines; technical author, teaching experience. Age 36; married. SM-6213.

ENGINEER with 2 years' practical civil engineering; 4 years' mechanical and electrical University course; 14 years' general engineering; experience including design and construction work, also installation of oil-refining machinery; industrial-plant machinery; boiler-house and power-plant machinery, and large steel-plant machine tools with electrical equipment; steam, air and water piping incident thereto. Thoroughly practical, executive ability. No objection to foreign service, providing salary is commensurate with position and location. Minimum, U. S., $5,000. At present employed. SM-6214.

MECHANICAL ENGINEER, capable executive, ex-A. E. F. officer; experienced in management, production, processes and design, equipped with mechanical and business education and 19 years' shop and office experience; desires permanent connection. SM-6215.

MECHANICAL ENGINEERING graduate; 6 years' experience in production and inspection work on medium-sized machined pieces and sheet steel products. Have successfully organized inspection department and held position of chief inspector. Actively participated in development of production of intricate machines and apparatus. Now teaching and studying at one of leading technical universities in East; free for work during summer. SM-6216.

SUCCESSFUL EXECUTIVE, graduate mechanical engineer with experience installing production and cost systems, labor-saving devices and conveying machinery. Has held positions as production manager and superintendent of machine shops and foundries; shown results in every case. SM-6217.

MANAGER, general superintendent, mechanical engineer; 18 years' broad practical experience in mechanical lines and foundry practice; 10 years' in executive capacities operating plants employing from 100 to 1000. Forceful and diplomatic executive, and can secure coöperation between various departments and harmony between company and employees. Initial salary $5,000. SM-6218.

MECHANICAL ENGINEER, graduate, desires responsible position, development, construction or maintenance. Age 33; married; 11 years' engineering experience covering machine design, cottonseed-oil mills, power houses, nitric and sulphuric-acid plants, coal-tar products, dyes, nitro-cellulose ether, alcohol and artificial silk. Board initiative and executive ability. Capable of intelligent leadership and helpful coöperation. SM-6219.

YOUR ENTERPRISE DEMANDS ENERGY, INITIATIVE AND ABILITY, and I have these together with fact that I am graduate of leading technical school, and have had thorough experience in machinery installation and handling of large organization; well known in South, and desire to connect with enterprising manufacturing company which requires executive or assistant to executive; am sure of my ground and can only consider excellent proposition. Now holding responsible position. SM-6220

MANUFACTURING EXECUTIVE, graduate mechanical engineer (Cornell 1912) with broad experience in factory management, handling of men and organizing and controlling production. Age 31; married. SM-6221.

REPRESENTATIVE, sales engineer, age 27; mechanical engineer; 7 years' designing and selling experience in heating, ventilation, sewage, sanitation, refrigeration, piping, power plant, etc. Desires change with progressive firm of engineering equipment or materials. SM-6222.

MECHANICAL ENGINEER, age 36; technical graduate; 12 years' experience as engineer in design and construction of industrial and power plants and as sales engineer for mechanical and power equipment; desires permanent position as sales engineer for machinery or as mechanical engineer with consulting or construction engineers. SM-6223.

INDUSTRIAL ENGINEER and draftsman recently with $30,000,000 corporation; 12 years' manufacturing experience, machine shop, rubber-tire industry and other mills. Shop experience and technical training, specializing in practical working conditions; desires opportunity to work out coöperative, labor-saving and economic layout of equipment. Age 35; married. SM-6224.

INSTRUCTOR mechanical engineer, with successful teaching and practical experience, open for teaching engagement next fall. Only position of responsibility considered. Satisfactory living conditions for family most essential consideration. SM-6225.

MECHANICAL ENGINEER, age 33; single; American; University education; 12 years' varied experience on design of tools, jigs, fixtures and special machinery; foreign trade and export business, power-house ventilation, shop experience, design of 7200-gal. alcohol distillery in connection with 2400-ton sugar plant. Location domestic or abroad; available immediately. SM-6226.

INDUSTRIAL ENGINEER, graduate Cornell 1917; age 26; two years' overseas Lieut. F. A. Year and half experience with Gantt methods and large manufacturing. Desires responsible position with firm of industrial engineer or large manufacturing concern located in East. Future and opportunity for advancement main consideration. SM-6227.

MANUFACTURING EXECUTIVE and MECHANICAL ENGINEER, age 38; 12 years' executive experience in design and manufacturing of high-grade machinery, typewriters, typesetting machines, printing presses, photo-engraving equipment for litho work, precision machinery, stamping and bottling equipment for food preserving, technical instruments and automobiles. A-1 practical man with ability to control help and thoroughly experienced in modern production methods. SM-6228.

MECHANICAL ENGINEER, graduate; age 30; married. Extensive experience as assistant chief mechanical engineer in complete charge of design and layouts of oil refineries. Specializing in design of steam plants, pumping systems and oil-burning equipment; also thorough knowledge of methods of testing mechanical equipment. SM-6229.

MECHANICAL ENGINEER, graduate Sheffield Scientific School, age 25. Holder of Second Assistant Marine Engineer's License. One year's sales-engineering experience in steam specialty, pipe, valves and fittings in power plants and industrial processes. One year as work's manager of company manufacturing trailers. Desires connection with concern in vicinity of Chicago in sales work, assistant to vice-president of manufacturer, or similar position wherein above experience and education will be of use. Willing to work for small salary in Chicago, if position offers opportunity upon recognition of ability. SM-6230.

PLANT ENGINEER or master mechanic; American; age 32. Ten years' broad experience in design, installation, maintenance, and successful handling of labor. SM-6231.

EXECUTIVE with 12 years' broad engineering experience and sound business training, desires executive position to which engineering knowledge is essential and which has future sufficiently attractive to warrant change. Also Assoc. A. I. E. E. Age 34; married. Location immaterial. Present salary $6,000. Available on 30 days' notice. SM-6232.

FACTORY REPRESENTATION, now handling accounts of four firms in eastern and export trade, desires to secure two or three additional firms that need this service. Has had ten years' engineering, construction and sales experience. Office located in financial section of N. Y. C. SM-6233.

MECHANICAL ENGINEER, Columbia graduate 1913. Now studying accountancy at N. Y. U. evenings. Engineering Ensign during war; 6 years' draftsman, machinist, salesman and test-man of power-house auxiliaries and printing machinery. Prefer New York City. SM-6234.

MECHANICAL ENGINEER, technically trained at Worcester Polytechnic Institute. Age 25. Experience involves general machine-shop work, toolmaking, foundry (iron) work as moulder and as assistant foreman, machined parts inspection, draftsman and as junior engineer in experimental laboratory. Desires work preferably in experimental or development lines where inventive ability in connection with sincere appreciation of practical problems is needed. SM-6235.

TOOL DESIGNER, age 24; married; 7 years' real practice, desires to connect with live progressive firm, where thorough knowledge of shop-practice planning and tool designing will be recognized and appreciated. Location New York City or Connecticut preferred. SM-6236.

ENGINEER, age 31; with 12 years' varied mechanical and chemical engineering experience, desires information of position involving work of investigative character, preferably in connection with manufacturing process control. Present salary $3,300. SM-6237.

TECHNICAL GRADUATE, age 27; single; 8 years' power-plant design, estimating and construction experience. Desires to make connection with some live organization either in capacity of correspondent, estimator or erecting engineer. Minimum salary $200 per month. SM-6238.

DRAFTSMAN, age 31; M.E. degree; single; 8 years' experience covering marine and station power-plant arrangement, piping and accessories. SM-6239.

MECHANICAL ENGINEER, average earnings past 20 years, $7,500 per annum. Qualified business administrator. Thoroughly familiar with lumber, and heavy lines iron, steel and machinery. Wide experience as designer, inventor, and foreign sales man. Married. Prefer New York or Philadelphia. Good investigator and report writer. Let me develop an export business for you. SM-6240.

EXECUTIVE, can get good work done efficiently, knows what good work is, and when it is efficiently done; 5 years' engineering training and experience, coupled with all-round knowledge of every department of business. Successfully held positions of superintendent, chief engineer and works manager. SM-6241.

MECHANICAL AND SALES ENGINEER, graduate mechanical engineer, age 30; ex-army officer, successful sales experience large power-plant machinery, wishes to locate premanently in St. Louis, Missouri. Desires position as sales manager or exclusive agency line of real merit. $3,600 salary or can invest small amount of capital in growing concern. SM-6242.

EXECUTIVE for SALES or FACTORY MANAGEMENT, experienced in design, manufacture and sales of power-plant apparatus; also experienced in quantity production of small parts. Technical graduate; at present employed. SM-6243.

OIL-REFINING ENGINEER acting as assistant to general manager of 20,000-bbl. refinery with experience in design, construction and operation of all equipment used; graduate electrical engineer; age 31; married. Desires similar position with organization affording opportunity for advancement through reason of having desirable personal qualities and ability to handle large affairs. SM-6244.

ELECTRICAL and MECHANICAL ENGINEER, technical graduate 1907. Desires connection with company manufacturing specialty. SM-6245.

MECHANICAL ENGINEER, technical graduate; age 26; 3 years' practical and 3 years' executive experience. Exceptionally good training in inspection work. Desires position with concern where future is unlimited. Personality, initiative and adaptability are prominent points in character. Location immaterial. SM-6246.

SALES ENGINEER, age 30; married; 10 years' successful experience in designing, estimating superintending erection and sales engineering on power-plant, heating and ventilation and refrigeration work, desires to connect with reliable, progressive organization representing any or all of the above lines. Headquarters preferably Philadelphia. SM-6247.

INDUSTRIAL RELATIONS EXECUTIVE of many years' experience in employment management industrial-educational work as director with one of the largest manufacturing plants in country. Work covered supplemental training of technical graduates and trades apprenticeship courses. Have supervised welfare activities, safety engineering, suggestion systems and employees committees. Familiar through actual experience with modern machine-shop practices, steel mills, fire arms, steel-shop construction, and manufacture of electrical machinery. Technical graduate in mechanical and electrical engineering. Satisfactory references. SM-6248.

EXECUTIVE ENGINEER, high-grade industrial-plant engineer wants position as engineering manager or works engineer. Good executive, capable of taking complete charge of work and getting results; 18 years' experience designing and erecting, contract- and purchasing, managing and operating complete

steam-power plants and industrial plants. American; married; age 43; good personality. A-1 references. SM-6249.

MECHANICAL ENGINEER, experienced in design and maintenance of industrial plants and equipment desires position as assistant chief draftsman or engineer. SM-6250.

SALES ENGINEER and TECHNICAL CORRESPONDENT, graduate mechanical engineer, age 30, desires connection with firm handling air compressors, pumps, and allied products; 6 years' general engineering experience, including testing and standardization, one and one-half years' industrial engineering and plant design, and one and one-half years' plant operation and maintenance. Location Philadelphia or vicinity. SM-6251.

MECHANICAL and ELECTRICAL ENGINEER, age 27; married; technical graduate; 2 years' experience as technical assistant to superintendent of oil refinery; 4 years' in engineering department of large research institution, 3 being in capacity of mechanical superintendent. Capable as plant executive. Location Philadelphia, St. Louis or South. Salary $3,600. SM-6252.

MECHANICAL and SALES ENGINEER, M.E., age 28; married; 7 years' experience in designing, charge of engineering department, field installation; construction engineer; sales engineer and purchasing engineer. Particularly qualified to assist busy engineering executive or take charge of commercial or business department of engineering concern. Location desired, New York City or vicinity. SM-6253.

ADVERTISING, young mechanical engineer wishes to connect with advertising or publicity department of engineering concern. Recent graduate Stevens; highest references. At present employed. SM-6254.

MECHANICAL ENGINEER wants job where ability to stop leaks will be valuable. Systematize but not by red tape. Ten years' experience; at present in charge of design and production of contracting shop. Salary $6,000, but want chance to earn more. Location unimportant. New York City preferred. SM-6255.

MECHANICAL ENGINEER, technical graduate; age 25; single; 3 years' experience with large sugar company on control work, concrete foundation and steel-building erection. Desires opportunity to locate with concern which wants young engineers to train for executive positions or for industrial-engineering work. SM-6256.

SHOP SUPERINTENDENT or general foreman. Not technical graduate; 26 years' on precision tools, interchangeable parts and automobiles; 13 years as executive working up from apprentice to general superintendent. Wages secondary consideration. Location New England States preferred, but Middle West considered. SM-6257.

DESIGNING ENGINEER with 7 years' experience in general engineering and 8 years' in design of small and medium-sized direct and alternating-current apparatus. Developed motors and generators for practically all industrial applications. Can furnish reference showing high-grade of mathematical and analytical ability. SM-6258.

MECHANICAL ENGINEER, graduate; thoroughly grounded; age 27. Subordinate and executive experience in foundry, machine shop, design, plant layout, production engineering, correspondence and sales. Desires connection with progressive concern. Open-minded, willing to work. Have sold anti-friction bearings and shop equipment. Send for detailed experience chart. SM-6259.

COMPTROLLER, financial man, at present comptroller in large industrial organization; has successfully devised and installed production and cost-accounting methods; desires connection with manufacturing or professional organization; 15 years' experience, partly professional, in widely varied industries, including metal and wood working, leather, enameling, paints, power plants, etc. University graduate; age 36; married. Beginning salary, $7,000 annually. SM-6260.

PRODUCTION ENGINEER, age 26; B.S. degree and post-graduate study in factory management. Experienced in time-study, plant layout, cost estimating, and production-control installation. Desires position either as assistant to manufacturing executive, or junior on staff of industrial engineer. Will also consider industrial engineering-research work. N. Y. City or metropolitan district preferred. SM-6261.

MECHANICAL and ELECTRICAL ENGINEER (Columbia) with broad and thorough engineering training and ability to get results. Desires position where results count. Experience includes work on general construction and in all departments of large electrical utility company. SM-6262.

MECHANICAL ENGINEER, technical graduate; age 27; wishes to use spare time for drafting, designing or tutoring on technical subjects anywhere in New York City. Have initiative ability to develop inventions, and to see things through. SM-6263.

ASSISTANT PRODUCTION ENGINEER, mechanical engineering education. Familiar with all modern production and cost systems; 9 years' experience at production and mechanical engineering, planning, designing, estimating. Capable assuming responsibilities and handling men. Successful experience as head of planning department, assistant factory manager and chief tool designer. SM-6464.

MECHANICAL ENGINEER AND EXECUTIVE, American, age 38; married; Cornell; 17 years' experience as construction engineer, engineer in charge of design and estimates; supervising engineer, sales engineer and manager of branch. Qualified by experience and personality to deal with executives. Available May 1. SM-6265.

ENGINEER EXECUTIVE, age 38; has been very successful as chief engineer and consulting engineer, designing as well as supervising. Diversified experience in construction work; wishes to connect as assistant to president or general manager; preferably with manufacturing concern. SM-6266.

DRAFTSMAN, age 30; designer tools, jigs, dies, and fixtures, including automatic machinery. Practical die, precision and production experience. Fast, neat and conscientious worker. Technically educated. SM-6267.

MECHANICAL ENGINEER. Capt. Ordnance Dept., recently discharged, available on drafting board or in field. Many years experience in design and construction of power plants, chemical works, textile mills and industrial buildings. SM-6268.

SALES ENGINEER. Graduate textile engineer; age 29; married. At present employed. 4 years' experience in engineering; 2 years' captain Coast Artillery. Desires position selling high-grade product in New England. SM-6269.

ELECTRICAL AND MECHANICAL ENGINEER, age 39. Thirteen years' experience in teaching, designing, installation and operation, will be open for engagement as superintendent or manager of power plant, ice plant, mill or similar works. Available May 15. Minimum salary $6,000. SM-6270.

DESIGNER, engineer and chief draftsman, age 31; 13 years' experience on supervision and design of engineering work as machinery design, research, development and experimental engineering, plant layout, design and development, structural and all work kindred to general and industrial engineering. Good executive, organizer with initiative. Desires position in any branch of engineering. Best references. SM-6271.

MECHANICAL AND CIVIL ENGINEER, single; age 31; technical graduate; 12 years' practical experience design and field. Reinforced concrete, structural steel, all kinds machinery and piping; boiler houses; last 18 months oil refinery. Home or foreign service. SM-6272.

WORKS MANAGER, high-grade executive desires to sell his services; 15 years' experience as general superintendent and work manager on products such as electrical goods, brass novelties, automobile parts, ball bearings, valves and fittings. Thoroughly familiar with modern factory methods and at present successfully engaged as works manager. Desires to connect with manufacturer. SM-6273.

ELECTRICAL MECHANICAL ENGINEER, graduate Cornell and Pennsylvania State; 7 years' experience design, construction, operation, management, large power developments, high tension, distribution hydraulics, thermodynamics, contracts, specifications, reports, valuation costs, efficiency work. Desires connection with future where executive and engineering ability are requisites. Best references; salary $4,800. SM-6274.

MECHANICAL ENGINEER, technical graduate 1916; 14 months' sales engineering or power-plant auxiliaries, air compressors, etc. During war, inspector of machinery for Navy Department. Now production engineer for firm building marine machinery. SM-6275.

WORKS MANAGER or SUPERINTENDENT with 19 years' practical experience in varied industries as bench hand, foreman, superintendent, industrial engineer, production engineer and works manager. Especially fitted by training and experience to organize new industry or to reorganize and build up your present business. Not interested unless proposition refers to permanent connection; to one of this nature will submit complete details of qualification and A-1 references. Age 40; American; married. Available June 1. SM-6276.

INDUSTRIAL ENGINEER, college graduate; experienced as apprentice, machinist, foreman and superintendent. Have successfully installed time-study, routing, and planning for small parts quantity production; and shop cost accounting in heavy repair shop. Age 34; married. Available about June 1. SM-6277.

SALES ENGINEER, married; age 31. Experienced; machine tool and equipment, oxy-acetylene apparatus, and machine operation; unlimited acquaintance in New England States. Salary $3,000 with expenses. SM-6278.

SALES ENGINEER or ASSISTANT SALES MANAGER. Experienced in sale, testing and efficient application of lubricating oils in industrial plants. Interested in any other line of sales engineering which insures future advancement. Technical graduate. In reply please state just what is offered. SM-6279.

ENGINEERING EXECUTIVE, age 42; possessing tact, personality, and thorough experience in general plant design, financing reports, appraisal; especially successful in rehabilitation and modernizing of existing plants and foundries. SM-6280.

MECHANICAL ENGINEER, Stevens; 16 years' experience; experience in design and erection of factory buildings, design and installation of machinery and equipment, manufacture of water gas, soap, chemicals, and colliery maintenance. Age 39, salary $3,000. SM-6281.

SALES ENGINEER desires position with machine-tool concern in sales department. Well acquainted with New England territory; for past two years has been selling direct for well-known New England machine tool manufacturer. Married. SM-6282.

MECHANICAL DESIGNER, graduate mechanical and electrical engineer; 19 years' broad manufacturing experience; design of special and automatic machinery, tools, etc.; production superintendent for stamped and interchangeable work. Competent to take charge of engineering department or supervise production along modern economical lines. Greater New York preferred. SM-6283.

EXECUTIVE POSITION desired in industrial plant by engineer familiar with modern business and shop administration, engineering and design. Experience covers hoisting and mining machinery, cranes and paper working machinery. Would consider position of sales engineer. Age 29. Prefer to locate in East. SM-6284.

MECHANICAL AND CHEMICAL ENGINEER, age 33. Experienced in manufacture of chemicals and paint pigments both from research and operating standpoint; also 4 years' successful selling experience. Can design and operate chemical plant and look after sale of product. Prefer small concern with possibilities of development. Salary $3,600. SM-6285.

MECHANICAL ENGINEER, married; 11 years' experience, plant layout and design, installation, selection and supervision of design of equipment. Desires connection in or near Philadelphia, on development of work from laboratory research and specifications. Would consider position on board, if chances for advancement are good. Salary desired $3,000. SM-6286.

YOUNG MECHANICAL ENGINEER, Stevens graduate, desires connection either as junior executive in some capacity wherein ability and experience in steam-engineering research or experimental work is essential, or with general consulting concern where training and knowledge of engineering would be exercised. Experienced as teacher of experimental and mechanical engineering. Resourceful, conscientious and capable. At present employed but available at short notice. Best references as to ability, character and personality. Metropolitan district preferred. SM-6287.

PRODUCTION ENGINEER. Mechanical engineer, Stevens 1918; age 27. Have had basic machine shop and plant experience. SM-6288.

INDUSTRIAL EXECUTIVE, skilled in modern methods of manufacturing apparatus, design and tooling, production and cost control. Thorough accountant. Resourceful harmonizer of both male and female labor securing highest output without interruptions or dissatisfaction. Technical graduate; business trained in management and marketing covering 20 years with nationally prominent institutions. SM-6289.

ENGINEER EXECUTIVE for plant design, construction, maintenance, etc.; technical graduate; age 35; also Assoc Mem.A.S.C.E.; 14 years' experience; last 9 years in office and field on design and construction of railway and industrial plant and buildings, executive work, purchasing, supervision, etc. Officer of Engineers, A. E. F. SM-6290.

FACTORY EXECUTIVE, 14 years' usually broad experience in factory production work; includes service as machinist, draftsman, inspector, foreman, superintendent, and works manager. Technical graduate; age 38. Interested in connection as works manager or service manager. SM-6291.

MECHANICAL ENGINEER, age 27; technical graduate; married; 3 years' experience in design,

shops, construction and estimating work. Officer in army during war. Desires commercial or technical position with good future. New York or vicinity preferred, but willing to go elsewhere. SM-6292.

SALES APPRENTICE COURSE of not over one years' duration that will lead to location in the South desired by mechanical engineering graduate of southern University of recognized standing. Age 24; resourceful; strong personality; good health. SM-6293.

ENGINEERING EXECUTIVE, having broad experience in charge of construction, organization and operation of some largest chemical plants in country, open for new position on or about July 1. Salary $7,500. Excellent and influential connections. Willing to consider proposition in any part of world. SM-6294.

MECHANICAL ENGINEER, superintendent or sales engineer. Technical graduate; married; age 33; 11 years' experience having specialized in industrial and steam power-plant lines. Can handle building end as well as mechanical equipment. Design, construction, investigations, reports, general maintenance and efficiency work. Would consider sales proposition. Available immediately. Location New York or vicinity. SM-6295.

TECHNICAL GRADUATE, age 26; single; experienced in power-plant operation and tests, drafting and textile-plant maintenance. Desires permanent connection with progressive concern. Salary secondary to future opportunity. References present and past employer. SM-6296.

ENGINEER, chemical, recent graduate; thorough training in mechanical engineering. Experienced in dry-cell manufacture. Aggressive and resourceful. Natural inclination leads to desire for location along sales and merchandizing lines. At present employed but available on short notice. SM-6297.

EXECUTIVE ENGINEER, also Assoc. Mem.A.S.C.E.; age 37; married; 18 years' valuable experience in design, construction, maintenance and alteration of industrial buildings and plants and their mechanical equipment. Also experienced in quantity production including close-limit gage work for interchangeability. Have worked up from draftsman to executive engineer. Position desired as works engineer or similar responsible assignment. Available at once. SM-6298.

GRADUATE ENGINEER with 15 years' experience in design, construction and combustion work with public service and private power plants; also purchasing and sales experience. Desires permanent position in executive work with reliable company. Age 37; married. SM-6299.

MECHANICAL ENGINEER, age 36. Experienced plant executive; 10 years' active experience field and office, design, erection, operation and maintenance of power and industrial plants; specialist on steam power and pumping plants, turbo-generators, hydraulic mining and dredging. Discharged after two years' service as Captain Engineers and desires connection Pacific coast or Inter-mountain states. Available October 1. SM-6300.

CONTRACT MANAGER, graduate engineer with 8 years' practical experience in writing, handling and execution of engineering contracts; open for engagement with responsible corporation. Have been handling contracts and contract work during past 5 years amounting to millions of dollars. Position should offer some inducement for ambitious young engineer. SM-6301.

MECHANICAL ENGINEER, technical graduate; single; age 33; 14 years' experience in design, construction in power plants, heating, ventilation, industrial plants, maintenance work, reports, correspondence and inspection of branch plants in U. S. Was engineer in Navy. Working knowledge of German. Desires change with future. Location immaterial. Salary $4,000. SM-6302.

# New Members of the Society

*The following is a list of those who have qualified for membership in the Society between the dates of February 1 and March 25, 1921. The grade is indicated by the symbol after the name; i. e., M-Member; A-Associate; AM-Associate-Member; J-Junior.*

ABELS, J. C.—J, Brooklyn, N. Y.
ACKERMAN, FRANK J.—AM, Buffalo, N. Y.
ADAMSON, ALLAN A.—AM, Rochester, N. Y.
ALVARADO, SALVADOR E.—J, Dearborn, Mich.
ANDERSON, CHARLES E.—M, New York, N. Y.
ANDERSON, HELMER N.—J, Harrison, N. J.
APPLEBAUM, SAMUEL B.—AM, New York, N. Y.
ARMSTRONG, CHARLES H.—J, New York, N. Y.
ARNOLD, ROY F.—AM, River Point, R. I.
ASKEW, MILES A.—AM, Chicago, Ill.
ATKINSON, GEO. P.—AM, Cleveland, Ohio
AUGUR, ROBT. C.—M, New York, N. Y.

BAILEY, C. J.—J, Bridgeport, Conn.
BAIRD, HOBART B.—M, New York, N. Y.
BALDAUF, WILLARD W.—AM, Stamford, Conn.
BALLOU, W. A.—M, Washington, D. C.
BALTZLY, CLIFFORD C.—AM, Philadelphia, Pa.
BARR, SAMUEL D.—AM, Brooklyn, N. Y.
BARRETT, ALFRED L.—M, New Haven, Conn.
BARTELS, W. ALLEN—M, Erie, Pa.
BARTEN, EDWARD A.—J, Philadelphia, Pa.
BARTHEL, OLIVER E.—M, Detroit, Mich.
BASSETT, BURDETT E.—J, Pittsburgh, Pa.
BATTU, LEOPOLD P. L.—M, New York, N. Y.
BAUMAN, EDWARD—M, New York, N. Y.
BEALE, LEONARD T.—M, Philadelphia, Pa.
BEAMAN, D. F.—M, Houston, Tex.
BEAN, KARL D.—J, Boston, Mass.
BEANS, WALTER H.—AM, Brooklyn, N. Y.
BEAVAN, BENJ. A.—J, Philadelphia, Pa.
BECKHORN, WALTER R.—AM, Brooklyn, N. Y.
BEERS, HENRY S.—J, Bridgeport, Conn.
BEGLEY, RICHARD W.—M, New York, N. Y.
BELLIS, WILLIAM C.—J, Philadelphia, Pa.
BENEDICT, CHAS. H.—M, Sheboyganm, Wis.
BENNEY, WILLIAM A.—AM, West Orange, N. J.
BENZIGER, JAKE U.—AM, Clanton, Ala.
BERCETCHE, FIRMO, JR.—AM, Los Angeles, Cal.
BERTELSEN, VALDEMAR—AM, New York, N. Y.
BILLIPP, ERNEST H.—M, New York, N. Y.
BINDIN, HUGH D.—AM, Buenos Aires, S. A.
BINNS, ARTHUR W.—J, Philadelphia, Pa.
BIRD, CHARLES T.—M, Detroit, Mich.
BLANDFORD, JOHN B., JR.—J, New York, N. Y.
BLOSS, LEONARD C. M.—Duquesne, Pa.
BODE, JOHANNES C. P.—AM, Worcester, Mass.
BOLLES, FREDERICK N.—M, Boston, Mass.
BOLTON, WM. R.—AM, New York, N. Y.
BONNER, ROBERT P.—J, Boston 9, Mass.
BONSTOW, THOMAS L.—M, London, Eng.
BORN, FRANK J.—AM, Milwaukee, Wis.
BOSCH, C. E.—J, E. Cambridge, Mass.
BOSMA, DIEDRICH J.—AM, Aberdeen, S. D.
BOWEN, CLARENCE A.—M, Lowell, Mass.
BOWLUS, GLENN H.—AM, Pasadena, Cal.
BRADLEY, ALEXANDER—A, New York, N. Y.
BRADLEY, JAMES H.—AM, Toronto, Ont., Can.
BRENDLIN, HERMAN J.—M, New York, N. Y.
BRIDGEWATER, HERBERT E.—M, Syracuse, N. Y.
BRODY, ISAAC—J, New York, N. Y.
BROOKE, IRVING E.—M, Chicago, Ill.
BROWN ALBERT K.—J, Philadelphia, Pa.
BUCHERT, HARRY—AM, New York, N. Y.
BUCKER, PAUL—AM, Columbus, Ohio
BUCKLEY, DANIEL J.—J, Pittsburgh, Pa.
BUELL, WILLIAM C., JR.—M, Pittsburgh, Pa.
BULLOCK, H. LESLIE—J, Newark, N. J.
BURFORD, ROBERT A., JR.—A, Birmingham, Ala.
BURGESS, KENNETH A.—AM, West Toronto, Ont., Can.
BURPEE, CHANDLER—J, Philadelphia, Pa.
BURT, WALTER R.—AM, New York, N. Y.
BUSHNELL, CLIFFORD D.—M, Lafayette, Ind.
BUTTERFIELD, FREDERICK C.—A, Woonsocket, R. I.
BUXBAUM, SAUL L.—J, Brooklyn, N. Y.

CALLAWAY, CLARENCE R.—M, Honesdale, Pa.
CAMDEN, ALEXANDER T.—AM, New York, N. Y.
CAMMARATA, FRANK—J, New York, N. Y.
CAMP, WM.—M, Plainfield, N. J.
CAMPBELL, ROBERT H.—AM, Decatur, Ill.
CANAN, WM. D.—AM, Milwaukee, Wis.
CARLSON, HARRY—AM, New York, N. Y.
CARPENTER, SAMUEL D.—AM, St. Louis, Mo.
CARPLES, VICTOR H.—AM, New York, N. Y.
CARR, WALTER DEL.—M, Hammond, Ind.
CARTER, JAMES H.—J, E. St. Louis, Ill.
CARTER, WILLIAM P.—M, New York, N. Y.
CARTY, MAURICE W.—M, Boston, Mass.
CASEY, ALBERT A.—J, Cleveland, Ohio
CHAPMAN, WM. H.—M, New York, N. Y.
CHARLES, HENRY E.—AM, Paterson, N. J.
CHILDS, GEORGE W.—M, Chester, Pa.
CHRISTIE, MORRIS—AM, New York, N. Y.
CHRISTIANSEN, GEORGE—J, Watervliet, N. Y.
CHURCH, LLOYD M.—AM, Hartford, Conn.
CLARK, LINCOLN—J, Cambridge, Mass.
CLARK, PHILIP C.—AM, Garfield, N. J.
CLOYD, EDWARD L.—AM, West Raleigh, N. C.
COLLINS, JOHN, JR.—AM, New York, N. Y.
CONLON, WILLIAM T.—J, Philadelphia, Pa.
COOK, HENRY R., JR.—M, Baltimore, Md.
COOPER, FRANK H.—J, Atlanta, Ga.
COPPOCK, WALTER J.—J, Philadelphia, Pa.
COVE, CHARLES H.—AM, West Warren, Mass.
CROCKER, HAROLD W.—J, Boston, Mass.
CROFT, TERRELL—M, St. Louis, Mo.
CRONHOLM, FREDERICK N.—AM, Calexico, Cal.
CROSBY, GEO. W.—J, Seward, Pa.
CUNEO, ALBERT R.—J, Jersey City, N. J.
CUNNINGHAM, ROBERT O.—AM, Braintree, Mass.
CURTIS, LEWIS B.—M, Bridgeport, Conn.

DANIEL, CHARLES M.—J, Mt. Vernon, N. Y.
DANIELS, RICHARD F.—AM, Seattle, Wash.
DART, EDWARD W.—M, New York, N. Y.
DAVIDSON, EZRA D.—AM, Ansonia, Conn.
DAVIDSON, JOSEPH—M, Atlanta, Ga.
DAVIS, ALLAN I.—AM, North Adams, Mass.
DAVIS, D. LOREN—J, DesMoines, Ia.
DAVIS, DANIEL L.—J, Worcester, Mass.
DAVIS, WILLIAM H.—AM, Baltimore, Md.
DAY, DONALD M.—J, Sellers, La.
DAY, DONALD W.—AM, San Francisco, Cal.
DeCAMP, WITSEL R.—A, Newark, N. J.
deCORIOLIS, ERNEST G.—M, Winchester, Mass.
DELERY, EUGENE F.—M, New Orleans, La.
DERVAUX, JOSEPH—J, Oil City, Pa.
DeVOE, BENJAMIN H.—J, Fremont, Ohio
DIAMAANO, GREGORIO C.—J, Baliway, Bulcan, P. I.
DICKSON, GEO. L.—M, Cincinnati, Ohio
DiDOMENICO, ANTHONY F.—J, Baltimore, Md.
DIERCKX, JULES—A, Brooklyn, N. Y.
DIETZ, LEWIS H.—J, Dorchester, Mass.
DIXON, LEON S.—M, Mattawa, Ont., Can.
DOW, RICHARD F.—M, Hartford, Conn.
DOWLING, NORTH, JR.—AM, Wilmington, Del.
DRAKE, ERNEST A.—M, Chicago, Ill.
DUNLAP, EDGAR F.—J, Atlanta, Ga.
DUNN, ROLAND I.—J, Lester, Pa.
DUPEE, CHAS. F.—M, Atlanta, Ga.
DuPUY, THOMAS F.—M, Buffalo, N. Y.
DURBIN, WM. O.—AM, Buffalo, N. Y.
DWYER, JAMES P., JR.—AM, Boston, Mass.

ELDERKIN, ARTHUR T.—AM, Philadelphia, Pa.
ELLIOTT, EDWARD—M, Worcester, Mass.
ELLIS, GERSHOM P.—J, Boston, Mass.
EMMONS, E. N.—J, Harrison, N. J.
ENGELMAN, HERMAN C.—AM, Harrison, N. J.
EVERITT, GEORGE G.—J, New York, N. Y.

FAGG, GEORGE E.—J, Stonega, Va.
FALES, HERBERT G.—J, Cambridge, Mass.
FARRELL, THOMAS A.—J, Newark, N. J.
FAUNCE, B. WARREN—AM, Camden, N. J.
FAUST, P. A.—M, Miami, Ariz.
FAY, SAMUEL W.—AM, Bridgeport, Conn.
FELTON, GEO. W.—M, Syracuse, N. Y.
FERRIER, CHAS. C.—J, Brooklyn, N. Y.
FERRIS, JOHN T.—J, Syracuse, N. Y.
FISH, ROGER E.—J, Erie, Pa.
FISK, FREDERICK M.—J, E. Cambridge, Conn.
FITCH, EDWARD A.—A, Yonkers, N. Y.
FITGERALD, HARRISON W.—M, Buffalo, N. Y.
FLINCHBAUGH, DONALD F.—AM, Boston, Mass.
FOGG, ERLON S.—M, New York, N. Y.
FORSYTHE, JAS. B.—AM, Dayton, Ohio
FOSTER, CHARLES B.—AM, Bridgeport, Conn.
FOX, WINTERS B.—J, Philadelphia, Pa.
FRANCIS, WILLIAM M.—M, Atlanta, Ga.
FRASER, WARREN F.—M, Westboro, Mass.
FREMONT, ELMER G.—A, New York, N. Y.
FULLER, GEORGE F.—M, Worcester, Mass.
FULSON, HIRAM O.—AM, Columbia, S. C.

GAINES, WALTER S.—AM, Mobile, Ala.
GAITHER, GEO. M., JR.—AM, Baltimore, Md.
GALLAGHER, DAVID—M, Jersey City, N. J.
GALLAGHER, J. J.—AM, Chattanooga, Tenn.
GEARING, CHARLES M.—M, Meriden, Conn.
GEE, WALTER S.—A, New York, N. Y.
GENZ, HENRY EDWARD—J, Atlanta, Ga.
GERKEN, EDWARD R.—J, Brooklyn, N. Y.
GILCREST, MURRAY H.—M, Sand Springs, Okla.
GILES, WALTER C.—J, Boston, Mass.
GOEBEL, WM. H.—J, Brooklyn, N. Y.
GOGAN, JOSEPH—M, Detroit, Mich.
GOLDTHWAIT, JOEL A.—J, Providence, R. I.
GORMLEY, JOSEPH E.—AM, Harrison, N. J.
GOTTSCHAU, CHRISTIAN M.—M, Denver, Colo.
GRAHAM, HUGH U.—J, Rome, N. Y.
GREENIDGE, E. T. P.—M, Huntington, Ind.
GRETHER, EDWARD C.—M, New York, N. Y.
GRIMMER, ERNEST A.—J, Hamilton, Ohio
GUGGISBERG, CHARLES F.—J, Minneapolis, Minn.

HARDING, ROY C.—AM, Cleburne, Tex.
HARPER, WILLIAM S.—A, Newark, N. J.
HARRIS, ANDERSON W.—AM, Chattanooga, Tenn
HARRIS, CHARLES H.—M, Keokuk, Ia.
HARRIS, ERNEST N.—AM, Seattle, Wash.
HARSEN, OTIS Y.—M, New York, N. Y.
HART, WALTER H.—M, New Britain, Conn.

HARTEN, JOHN—AM, Hartford, Conn.
HAYES, WILLIAM E.—M, S. Charleston, W. Va.
HAYWARD, RALPH A.—AM, New York, N. Y.
HAZEN, S. A.—AM, Newark, N. J.
HEATLEY, FREDERICK—J, Readville, Mass.
HEDBERG, HAROLD F.—J, Bangor, Me.
HEGARTY, WILLIAM—AM, Bloomfield, N. J.
HEIBEL WALTER E.—M, New York, N. Y.
HENCH, WM. M.—M, Kearney, N. J.
HENDERSON, ROBERT M.—AM, Attalla, Ala.
HERON, CHARLES M.—J, Lester, Pa.
HESCOCK, ETHAN N.—AM, New York, N. Y.
HILL, CHARLES F.—J, Boston, Mass.
HILL, FRED C.—AM, Syracuse, N. Y.
HILLS, LESLIE W.—J, San Francisco, Cal.
HOFFINGHOFF, ARTHUR C.—A, Cincinnati, Ohio
HOFFMANN, BALTHASAR, JR.—AM, Milwaukee, Wis.
HOGE, FREDERICK H.—M, Chicago, Ill.
HOLLANDER, OTTO—J, Bethlehem, Pa.
HOMAN, WM. C.—M, Meriden, Conn.
HOPPE, ROLAND C.—J, Port Arthur, Tex.
HORIGAN, JOHN H.—AM, Athol, Mass.
HOUGH, ULYSSES—M, Spokane, Wash.
HOUGHTEN, FERRY C.—AM, Pittsburgh, Pa.
HOUSTON, GRAY J.—AM, New York, N. Y.
HUBBINETTE, CARL W.—AM, Jersey City, N. J.
HUMMEL, JESSE G.—M, Ames, Ia.
HUNT, JAMES E.—AM, Philadelphia, Pa
HUNTER, CLARENCE J.,—A, Philadelphia, Pa.
HUNTER, RONALD C.—J, Columbus, Ohio
HUTCHINSON, ADELBERT A.—M, Atlanta, Ga.
HYDE, ERWIN C.—AM, Binghamton, N Y.

INGALLS, ELROY D.—J, Providence, R. I.
IVES, GEORGE C.—J, Lester, Pa.

JACKSON, ALEXANDER F.—AM, New York, N. Y.
JACKSON, SAMUEL D.—J, New Orleans, La.
JARVIS MARSHALL N.—AM, Gildersleeve, Conn.
JOHN, EDWARD T.—J, Wausaw, Wis.
JOHNSON, PAUL R.—M, Worcester, Mass.
JOHNSON, WILLS—M, Wilmington, Del.
JONES, ALONZO L., JR.—J, Holyoke, Mass.
JONES, J. BARCLAY, JR.—J, Passaic, N. J.
JONES, JOHN T.—M, New Orleans, La.
JONES, LESTER M.—AM, New York, N. Y.
JONES, YEAMANS P.—J, Philadelphia, Pa.
JOOS, CHAS. E.—J, Philadelphia, Pa.
JUNE, ROBT.—AM, Detroit, Mich.
JUSTICE, ITHAMAR M.—A, Dayton, Ohio

KATZENMEYER, JOHN A.—M, Ellwood City, Pa.
KELLY, JOSEPH M.—J, Pittsburgh, Pa.
KELLY, JOSEPH T., JR.—M, Mansfield, Ohio
KELLY, PHILIP M.—J, Jersey City, N. J.
KENDRICK, WARREN F.—M, Detroit, Mich.
KENT, LAURENCE F.—J, Atlanta, Ga.
KERR, EDWARD A. N.—J, New York, N. Y.
KIRKBERG, HERMAN A.—AM, West Orange, N. J.
KIRKPATRICK, CRAWFORD N.—A, Waynesboro, Pa.
KITTREDGE, BERTIE L.—AM, Hawkesbury, Ont., Can.
KIVLIN, ALFRED P.—AM, N. Attleborough, Mass.
KLEIN, LOUIS W.—AM, Port Carbon, Pa.
KLEINSCHMIDT, ROBERT—J, Cambridge, Mass.
KLIPPEL, GEO. H.—AM, Newport News, Va.
KNERR, DAN. G.—AM, Dayton, Ohio
KRELLEN, HARRY I.—J, New York, N. Y.
KULP, HENRY B.—J, Phoenixville, Pa.

LaCROSSE, EMMETT—M, New York, N. Y.
LAKE, EVERETT J.—M, Hartford, Conn.
LANCE, WILLIAM W.—J, Hartford City, Ind.
LANDIS, LAWRENCE H.—M, Harrisburg, Pa.
LAWTON, FRANK W.—J, Philadelphia, Pa.
LEIGHTON, MARSHALL O.—M, Washington, D. C.
LEWIS, BENJ. L.—A, New York, N. Y.
LEWIS, RICHARD C.—J, Ansonia, Conn.
LIEBREICH, OSCAR P.—J, New York, N. Y.
LINCOLN, CHARLES S.—M, Milwaukee, Wis.
LINDQUIST, DAVID L.—M, New York, N. Y.
LITTLE, WILLIAM R.—AM, Boston, Mass.
LOEB, ALBERT L.—AM, Atlanta, Ga.
LONGERGAN, J. E.—M, Philadelphia, Pa.
LUBASH, MARTIN—J, Richmond Hill, L. I., N. Y.
LUPTON, EDGAR B.—AM, Little Falls, N. J.
LUTHER, BENJAMIN S.—AM, Philadelphia, Pa.
LYNCH, DANIEL J., JR.—J, Lynn, Mass.
LYNCH, JOHN E., JR.—AM, Boston, Mass.

McCARTY, JAMES E.—J, New York, N. Y.
McCONALD, WM. H.—M, New York, N. Y.
MacCULLOUGH, GLEASON H.—J, Worcester, Mass.
McDOWELL, DAVID W.—J, Wissinoming, Pa.
McCUTCHEN, ROY M.—J, Camp Benning, Ga.
McFARLAND, CHARLES T.—AM, Kansas City, Mo.
McGINN, EDWARD J.—AM, New York, N. Y.
McGREGOR, HOWARD L.—AM, Detroit, Mich.
McLAUGHLIN, JOHN E.—J, Jersey City, N. J.
McLOUGHERY, CHAS.—M, Philadelphia, Pa.
McMEEKIN, BOWMAN M.—M, Shelton, Conn.
McNEAR, GEORGE R.—J, Boston, Mass.
MALLOY, JOHN D.—AM, Hartford, Conn.
MANGER, PAUL A.—J. Buffalo, N. Y.
MANN, OLIVER—AM, Ft. Worth, Tex.
MARKER, ROLAND H.—J, Toledo, Ohio
MARSHALL, DAVID L.—AM, Philadelphia, Pa.
MARSHALL, HENRY H.—M, Hartford, Conn.
MASEK, JOHN A.—M, Milwaukee, Wis.
MASON, WENDELL E.—J, Ann Arbor, Mich.
MASSINI, J. J.—J, Schenectady, N. Y.
MATCHETT, THOMAS—M, New York, N. Y.
MATHER, ARCHIE J.—M, Kewanee, Ill.
MAXWELL, HARRY—M, New York, N. Y.
MEADE, NORMAN G.—A, Atlanta, Ga.
MEANY, EDWARD A.—J, Brooklyn, N. Y.
MERRITT, LUCIUS R.—AM, New York, N. Y.
MERRITT, RALPH N. S.—J, Worcester, Mass.
MESTA, MERLE A.—J, Pittsburgh, Pa.
MEYER, HERMAN F.—J, Brooklyn, N. Y.
METZ, WILLIAM R.—J, Ensenda, P. R.
MILLAR, ROBERT E.—AM, Philadelphia, Pa.
MILLER, LeROY J.—J, Brooklyn, N. Y.
MILLER, JAY C.—AM, Lebanon, Pa.
MILLER, WM. A.—J, Buffalo, N. Y.
MITCHELL, GEORGE W.—AM, St. Louis, Mo.
MOLLER, KENNETH—M, Boston, Mass.
MITRA, DHIRENDRA N.—J, West Lynn, Mass.
MONTALVO, WILLIAM W, JR.—M, New York, N. Y.
MONTGOMERY, ORA C.—M, New York, N. Y.
MOOHL, JOHN G. J.—M, Cleveland, Ohio
MOORE, CLAYTON H.—AM, New York, N. Y.
MOORE, H. CLAY—A, Atlanta, Ga.
MORROW, S. L.—M, Birmingham, Ala.
MORSE, JAMES L.—M, Golden, Colo.
MUHRER, H. L.—AM, New York, N. Y.
MUNIER, LEON L.—AM, New York, N. Y.
MURRAY, FREDERICK F.—J, St. Louis, Mo.

NASH, HOWARD B.—M, Chicago, Ill.
NAWRAT, STEPHEN J.—J, New York, N. Y.
NEAL, GEORGE A.—AM, Michigan City, Ind.
NEFF, EARL C.—J, Royal Oak, Mich.
NEWMAN, JOSEPH, JR.—J, Philadelphia, Pa
NEXSEN, RANDOLPH H.—M, New York, N. Y.
NOLAND, SOLLIE C.—AM, Atlanta, Ga.
NORDBERG, BRUNO V. E.—M, Milwaukee, Wis.
NORMAN, ROY A.—M, Ames, Ia.
NORTH, RICHARD A.—J, New York, N. Y.
NORTHEND, ALLAN P.—M, Hartford, Conn.
NUNAN, THOMAS R.—AM, Atlanta, Ga.

O'BRIEN, EDWARD J.—J, St. Louis, Mo.
OLIND, JOHN H.—J, Meriden, Conn.
OLSEN, WM.—J, New York, N. Y.
O'NEILL, WM. E.—J, Elizabeth, N. J.
OWEN, CHARLES D.—AM, Passaic, N. J.

PACK, EUGENE P.—J, Cambridge, Mass.
PADDOCK, RUSSELL G.—J, Connersville, Ind.
PANERO, GUY B.—J, New York, N. Y.
PARKER, FRANK E.—AM, Boston, Mass.
PARKER, JOHN—M, New York, N. Y.
PARKES, GEORGE H.—J, Williamsport, Pa.
PARSONS, CHAS. J.—J, New York, N. Y.
PATTISON, GEORGE B.—M, Detroit, Mich.
PEARCE, LESTER F.—AM, Philadelphia, Pa.
PEEHL, CARL F.—J, Edgewater, N. J.
PEYSER, HAROLD—A, New York, N. Y.
PFEIL, WALTER G.—AM, Passaic, N. J.
PLATZ, EDWARD H., JR.—AM, Chicago, Ill.
PORTEOUS, EDWARD J.—M, Lompoc, Cal.
PRAY, JOHN W.—AM, Ft. Dodge, Ia.
PRENDERGAST, RICHARD F.—AM, New York, N. Y.
PUC, VOJTECH—AM, L. I. City, N. Y.

RADERMACHER, LAWRENCE J.—J, Appleton, Wis.
RAINEY, MORTON J.—J, New Bedford, Mass.
RATHMELL, JOHN M.—AM, Conneaut, Ohio
RAYNER, LESTER H.—M, New Orleans, La.
RECH, PHILIP D.—J, Philadelphia, Pa.
REED, FRANCIS T.—J, Charleston, S. C.
REICHARD, HARRY G.—J, St. Louis, Mo.
REIDINGER, MAXWELL L.—M, Elizabethport, N. J.
REKER, CARL H.—J, New Haven, Conn.
RENNIE, JOHN A.—M, New York, N. Y.
REYNOLDS, FRANCIS J.—J, Waterbury, Coan.
REYNOLDS, LEWIS M.—J, Liberty, N. Y.
RHEINFELDT, JOHN T. B.—AM, Wilkes-Barre, Pa.
RHOADS, BURT L.—M, Denver, Colo.
RIGA, ANDREW J.—J, Hartford, Conn.
RIORDAN, JOHN M.—M, Cleveland, Ohio
RISLEY, WALTER J., JR.—J, Philadelphia, Pa.
ROBERTS, JAMES T., JR.—J, Memphis, Tenn.
ROCKMAN, W. H., JR.—AM, Tulsa, Okla.
ROBINSON, HUGH A.—AM, Keyport, N. J.
RODGERS, PAUL C.—J, New York, N. Y.
ROGERS, FRANCIS C.—AM, Gloucester City, N. J.
ROOT, WARREN S.—AM, Elizabeth, N. J.
ROSBOROUGH, JAMES G., JR.—AM, St. Louis, Mo.
ROSE, ALEXANDER—M, Greenville, S. C.
ROSEN, THEODORE—J, New York, N. Y.
ROSS, THEODORE H.—J, Pittsburgh, Pa.
RUSHTON, LEON E.—AM, Sacramento, Cal.
RUSSELL, JAMES W.—AM, New Haven, Conn.
RUTH, JAMES E.—AM, Madison, Wis.
RYMAN, CHARLES F.—J, Pittsburgh, Pa.

SADLER, ROBT. A.—J, Brooklyn, N. Y.
SANDO, FRANCIS B.—J, New York, N. Y.
SAYNER, LAURENCE—AM, Detroit, Mich.
SCALLY, ROBT. A.—AM, Eldorado, Kans.
SCHAEFER, EDWARD E.—J, New York, N. Y.
SCHAFTER, ROY A.—AM, Milwaukee, Wis.
SCHALLER, GILBERT S.—J, Mendota, Ill.
SCHEN, AUGUSTUS R.—M, Lowell, Mass.
SCHERER, FRANK J.—J, Newark, N. J.
SCHICKEL, NORBERT H.—M, Stamford, Conn.
SCHMIDT, ALBERT G.—M, Montour Falls, N. Y.
SCHMIDT, CARL W.—J, Philadelphia, Pa.
SCHOCH, NORMAN H.—AM, Philadelphia, Pa.
SCHOFIELD, HAROLD E.—AM, Philadelphia, Pa.
SCHRADER, LLOYD F.—AM, New York, N. Y.
SCHRAMM, C. HENRY, JR.—J, Philadelphia, Pa.
SCHROEDER, FRED A.—M, New York, N. Y.
SCHUNCK, CARL F.—M, Ansonia, Conn.
SCHUSSLER, WALTER H.—M, Philadelphia, Pa.
SCHWARTZ, EDWARD H.—J, New York, N. Y.
SCHWARTZ, WALTER E. D.—J, Detroit, Mich.
SCHWEISTHAL, FRED G.—AM, Chicago, Ill.
SCOTT HARRY E.—M, Cleveland, Ohio
SCOTT, RUMSEY W.—M, New York, N. Y.
SCOTT, JOHN T.—M, San Francisco, Cal.
SEARS, EDWARD A.—AM, New York, N. Y.
SEE, THEODORE S.—M, Pittsburgh, Pa.
SEGEL, JOSEPH—AM, Wilmington, Del.
SEMONSEN, OTTO C.—J, New York, N. Y.
SENTOR, CARL A.—AM, New York, N. Y.
SERENA, MICHAEL F.—J, Saugatuck, Conn.
SEVERSEN, BARNEY G.—AM, Chicago, Ill.
SEYLER, GEORGE A.—M, Cincinnati, Ohio
SHAFER, ALFRED E. M.—J, Palmerton, Pa.
SHAKMEN, JAMES G.—AM, Chicago, Ill.
SHANER, EARL L.—AM, Cleveland, Ohio
SIEGEL, DAVID T.—J, New York, N. Y.
SIRRINE, JOSEPH E.—M, Greenville, S. C.
SJOBERG, SIDNEY T.—AM, Harvey, Ill.
SLEEPER, PAUL DeVOE—AM, Newport News, Va.
SMITH, BRONSON H.—M, New York, N. Y.
SMITH, EDWIN R.—AM, Firchburg, Mass.
SMITH, FLOYD T.—M, Schenectady, N. Y.
SMITH, GEO. J.—M, New York, N. Y.
SMITH, HAROLD E.—J, Jersey City, N. J.
SMITH, THEALL F.—J, Springdale, Conn.
SOLT, STANLEY O.—AM, Bethlehem, Pa.
SONTAG, MAX—J, Brooklyn, N. Y.
SOUDER, CLEMENT F., JR.—AM, Toledo, Ohio
SPIETH, BENJAMIN S.—AM, Madison, Wis.
SPILLANE, JOHN F.—AM, New Haven, Conn.
SPITZFADDEN, ALFRED E.—J, New York, N. Y.
STAGGS, HORACE M.—J, Florence, Kan.
STAUFFER, FRED—J, Cleveland, Ohio
STAVENSON, GEORGE K.—AM, New Haven, Conn.
STEINER, WALTER A.—J, New York, N. Y.
STEPHEN, ALEXANDER—AM, New York, N. Y.
STEVENS, CLARENCE C.—AM, Bristol, Conn.
STOELZER WALTER H.—J, New York, N. Y.
STOKES, SAMUEL O.—J. New York, N. Y.
STOLZ, PAUL L.—M, Kansas City, Mo.
STRATTON, ALBERT C.—J, Passaic, N. J.
STUBBS, WILLIAM F.—M, Sarnia, Ont., Can.
STULL, EUGENE S, JR.—J, Brooklyn, N. Y.
SULLIVAN, LEO G.—AM, New York, N. Y.
SULLIVAN, WILLIAM L.—A, Tulsa, Okla.

TAIT, RALPH S.—J, Lawrence, Kan.
TANIS, GILBERT B.—AM, Paterson, N. J.
TATE, JAMES—J, Chicago, Ill.
TAYLOR, ALBERT H.—M, Phillipsburg, N. J.
TAYLOR, JESSE, JR.—AM, Philadelphia, Pa.
TAYLOR, THORON C.—M, Detroit, Mich.
TAYLOR, WM. D.—AM, Hawkesbury, Ont., Can.
TELL, LAWRENCE H.—AM, Salem, Mass.
TELLER, S. JAY—M, Hartford, Conn.
THIEL, B. C.—J, Mt. Vernon, Ohio
THOMPSON, CLIFFORD F.—J, Cambridge, Mass.
THOMPSON, F. ARCHER—M, Bridgeport, Conn.
THOMPSON, J. COX—M, Lemoyne, Pa.
THOMSON, THOMAS S.—M, Los Angeles, Cal.
TICKELL, STANLEY M.—J, New York, N. Y.
TIGER, HOWARD L.—J, New York, N. Y.
TIGWELL, PERCY H.—J, Beloit, Wis.
TODD, JOHN N.—M, Seattle, Wash.
TODD, MITCHELL—J, Lincoln, N. H.
TOEWS, GUSTAV P.—J, Washington, D. C.
TUCKER, RAYMOND R.—J, St. Louis, Mo.
TUFTS, WM.—M, Boston, Mass.

USENER, JOHN F.—M, Houston, Tex.

VanBUSKIRK, GEORGE L.—J, New York, N. Y.
VANCE, J. HENRY—M, Akron, Ohio
VAN DENVEER, T. W.—M, Dover, N. J.
VAN DOREN, W. D.—M, New York, N. Y.
VER PLANCK, WILLIAM E.—M, Schenectady, N. Y

WALKER, WM. J.—J, Houston, Tex.
WALLACE, JAMES H.—M, Westerleigh, S. I., N. Y.
WALTON, EARLE—AM, Boston, Mass.
WARRICK, WOODWARD A.—AM, Indianapolis, Ind
WATERMAN, BENJ. F.—M, Providence, R. I.
WATROUS, I. ALLEN—AM, Bridgeport, Conn.
WATSON, CLAUDE C.—J, Elizabeth, N. J.

WATSON, JAMES S.—M, Indianapolis, Ind.
WEI, TSEN FU—J, Bethlehem, Pa.
WEISS, MARMION M. L.—J, New York, N. Y.
WELLINGTON, C. OLIVER—A, Boston, Mass.
WELLS, WARREN M.—AM, Detroit, Mich.
WELLS, EDWARD H.—M, New York, N. Y.
WELTY, ALBERT B.—M, Rockford, Ill.
WEST, FRANK R.—J, Stamford, Conn
WEYER, LEO O.—AM, New York, N. Y.
WEYL, PIERCE A.—J, Anderson, Ind.
WHEATON, WILLIAM E.—AM, Plainfield, N. J.
WHITAKER, OROON D.—M, Birmingham, Ala.
WHITFORD, ALEXANDER W.—M, New York, N. Y.
WILKS, VICTOR H.—M, New York, N. Y.
WILLIAMS, GARDNER S—M, Ann Arbor, Mich.
WILLOUGHBY, VICTOR R.—M, New York, N. Y.
WILSON, ALEXANDER, 3RD—M, Philadelphia, Pa.
WILSON, HOWARD J.—AM, Philadelphia, Pa.
WOLFF, RICHARD A.—AM, New York, N. Y.
WOLLEN, CHARLES E.—AM, Baltimore, Md.
WOOD, GEORGE E—M, New Haven, Conn.
WORDEN, BEVERLEY L—M, West Orange, N. J.
WORLEY, FLOYD E.—AM, Williamsport, Pa.
WORTH, DANIEL B.—J, West Raleigh, N. C.
WORTH, HAROLD H.—J, New York, N. Y.
WUENKER, RALPH F.—J, Newark, N. J.
WURTH, WALTER A.—J, New York, N. Y.
YEAGER, LEO R.—AM, Pittsburgh, Pa.
YOUNG, PERCY A.—AM, Baltimore, Md.
ZILBOORG, JAMES M.—J, New York, N. Y.

# CANDIDATES FOR MEMBERSHIP

## TO BE VOTED ON AFTER MAY 30, 1921

BELOW is a list of candidates who have filed applications since the date of the last issue of MECHANICAL ENGINEERING. These are arranged geographically.

Unless objection is made to any of the candidates by May 30, 1921, and provided satisfactory replies have been received from the required number of references, they will be balloted upon by the Council.

NEW APPLICATIONS

### Alabama

SMITH, LEE R., Mechanical Draftsman, Anniston Steel Co., Anniston

### California

FUNK, IRA B., Union Oil Co., of California, Los Angeles
GOSSMAN, ANGELO L., Western Division Manager, Celite Products Co., San Francisco
KOEBIG, ADOLF H., JR., Partner, Koebig & Koebig, Los Angeles
McDONOUGH, PATRICK W., Superintendent, Los Angeles Manufacturing Co., Los Angeles
MANGUN, LESLIE G., Works Engineer, El Segundo Refinery, Standard Oil Co. El Segundo
PEABODY, ROBERT M, Designing Engineer, Southern California Edison Co., Los Angeles

### Colorado

POOL, RALPH Y., General Superintendent, The Intermountain Railway, Light and Power Co., Colorado Springs

### Connecticut

BAUER, PETER W., Instructor in Drafting, State Trade School, New Britain
BRIGHAM, FREDERICK W., Checker, Hartford Fairmont Co., Hartford
DARLINGTON, STEPHEN P., Student, Sheffield Scientific School, Yale University, New Haven
DWYER, WILLIAM S., Chief of Estimating Department, Bullard Machine Tool Co., Bridgeport
MacDONALD, NEIL M., Supervisor, Power Department, Winchester Repeating Arms Co., New Haven
SLEEPER, HAROLD R., Chief Draftsman, J. N. Lapointe Co., New London
VAN SILLER, ALFRED, Inspector, United States Navy, New Haven

### Delaware

MERVINE, WILLIAM G., Assistant Engineer, Benjamin F. Shaw Co., Wilmington

### District of Columbia

RUGGLES, COLDEN L., Chief of Technical Staff, Ordnance Department, U. S. A., Washington

### Georgia

ADKERSON, BRANCH O., Student Engineer, American Telephone & Telegraph Co., Atlanta

### Illinois

BIRKEBAK, CHRISTIAN A., General Foreman, Union Special Machine Co., Chicago
BUCKHAM, HENRY B., Sales and Designing Engineer, Allbright-Nell Manufacturing Co., Chicago
DIERCKS, EDGAR, Junior Mechanical Engineer, Sanitary District of Chicago, Chicago
DUTTON, ROBERT L., President, Key Boiler Equipment Co., East St. Louis
ELMENDORF, ARMIN, Consulting Engineer, Haskelite Manufacturing Corpn., Chicago
KEY, ELMER A., Superintendent of Construction, Key Boiler Equipment Co., East St. Louis
KRAUTHEIM, WILLIAM C., Estimator, Commonwealth Steel Co., Granite City
McDONNELL, EDWARD W., Engineer of Sales, Economy Engineering Co., Chicago
MOORE, JOHN J., Sales Manager, Thomas Elevator Co., Chicago
NELSON, JOHN A., Designing Engineer. Power Plants, Sinclair Refining Co., Chicago
PETERSON, HAROLD C., Engineer, Swift & Co., Chicago
RAYMAKER, JAMES H., Industrial Supervisor, L. V. Estes, Inc., Chicago
REGENSBURGER, RICHARD W., Research & Test Engineer, Swift & Co., United States Yards, Chicago
SCHLEICHER, EMIL J., Construction Engineer, Commonwealth Steel Co., Granite City
TAYLOR, JOHN O., Consulting Engineer, Taylor & Jordan Engineers, Chicago
TOWLE, HOWARD A., Student Engineer, Western Electric Co., Chicago
TYDEMAN, FREDERIK W. L., Refinery Superintendent, Roxana Petroleum Corpn., Wood River

### Indiana

COMBS, MAHLON A., Maxon Furnace & Engineering Co., Muncie

### Kansas

AMBLER, HALFORD H., Civil Engineer and Chief Draftsman, The Solvay Process Co., Hutchinson
CAMPBELL, A. L., Chief Engineer, The Solvay Process Co., Hutchinson

### Maryland

GOEBEL, GEORGE, Supervisor Production Machinery, Crown Cork and Seal Co., Baltimore
McCURDY, CHARLES T., Consulting Engineer, Martin & Gardner, Baltimore

### Massachusetts

BELDEN, ALBERT G., Mechanical Engineer, Norton Co., Worcester
BENOIT, ARMAND W., Assistant Engineer, Chas. T. Main, Boston
BRISTOL, BENJAMIN H., 2nd, Assistant Superintendent, The Foxboro Co., Foxboro
CAHILL, JAMES H., Head of Engineering Department, Lapointe Machine & Tool Co., Hudson
CHEEVER, PAUL, Superintendent of Power, Merrimac Chemical Co., Boston
FEACEY, EDWIN T., New England Oil Refining Co., Fall River
FLETCHER, HERBERT L., Engineer, A. B. See Electric Elevator Co., Boston
GODDEN, HARRY M., Designing and Construction Engineer, The Lamson Co., Boston
KING, EVERETT F., Safety Engineer, H. A. Hale, Jr., & Co., Boston
LAWRENCE, ALMON R., Assistant Engineer, Edison Electric Illuminating Co. of Boston, Boston
McCULLOCH, ALBERT M., General Manager, McCulloch Manufacturing Co., Boston
MAHAN, JOE R., Graduate Student, Massachusetts Institute of Technology, Cambridge
MANDELL, IRVING F., Mechanical Engineer, Watertown Arsenal, Watertown
OLEWINE, GEORGE A, New England Oil Corpn., Fall River
OSGOOD, WILLIAM R., Assistant in Mechanical Engineering, Massachusetts Institute of Technology, Cambridge
PARENT, JOSEPH V., Mechanical Draftsman, Reed-Prentice Co., Worcester
SMITH, CHETWOOD, President and General Manager, Stack Heater Co., Boston
SOUTHWICK, ARTHUR M., Machine Designer, Bird & Son, East Walpole
STEINBACH, EDWARD S., Mechanical Engineer, Stone & Webster, Inc., Boston
TAYLOR, IRVING A., Chief Engineer, Sanford Riley Stoker Co., Worcester
WILCOX, WILLIAM, District Engineer, Whitlock Coil Pipe Co., Boston
WILDER, CHARLES J., Chief Engineer, Washington Mill, American Woolen Co., Lawrence
WILLIAMS, FRANK E., Construction Foreman, Turbine Department, General Electric Co., Boston

### Michigan

BEGEMAN, MYRON L., Instructor of Mechanical Engineering, University of Michigan, Ann Arbor
STACY, JOHN A., Machine Tool Salesman, Peninsular Machinery Co., Detroit

### Minnesota

JOHNSON, HELGE R. N., Sales Engineer, Sales and Engineering Co., Minneapolis
ROBERTSON, BURTON J., Assistant Director, Experimental Engineering Laboratory, University of Minnesota, Minneapolis

### Missouri

FREDERICKS, CHARLES C., Vice-President and General Manager, St. Louis Pump and Equipment Co., St. Louis
MEYER, CHARLES W., Designing Engineer, Busch-Sulzer Bros. Diesel Eng. Co., St. Louis
NORDMEYER, CARL L., Sales Engineer, Tait & Nordmeyer Engineering Co., St. Louis
VEATCH, N. T., JR., Black & Veatch, Kansas City

### New Hampshire

LEARNARD, HARRY DEW., Mechanical Superindent, Great Falls Manufacturing Co., Somersworth

### New Jersey

BEY, GEORGE H. T., Inventor and President, Hudson Pump Co., Inc. Jersey City
BLAIR, J. ARTHUR, Assistant to Superintendent of Equipment, Joseph Campbell Co., Camden
CHASON, DANIEL H., Mechanical Engineer, Singer Manufacturing Co., Elizabethport
D'AIELLO, MARIANO J., The Babcock & Wilcox Co., Bayonne
GUEMPEL, ROBERT R., Tool and Machine Designer, Klaxon Co., Newark
HARNED, GEORGE T., Boiler-room Superintendent, United States Metals Manufacturing Co., Chrome
JACOBSON, HUGO W., Assistant Chief Engineer, Gould & Eberhardt, Irvington
KLEIN, HENRY G., Trouble Test Engineer, Babcock & Wilcox Co., Bayonne
LEIS, JAMES W., Superintendent, Magor Car Corpn., Clifton
LOTT, SAMUEL H., Assistant Professor, Stevens Institute of Technology, Hoboken
McCANN, LELAND R., Designing Draftsman, American Can Co., Newark
MURPHY, WILLIAM D., Research Engineering Department, Federal Shipbuilding Co., Kearney
PITBLADDO, GRANT W., Production Engineer, Federal Shipbuilding Co., Kearney
SCHWENNESEN, HERMAN A. B., Westfield
SHIELDS, SYLVESTER J., International Motor Co., Plainfield
VAN RIPER, FRANCIS H., West Hoboken
WHEELER, FRANK I., JR., Plant Engineer, Tiffany & Co., Silver Works, Newark
YAU, CHARLES Y., Student Sales Engineer, Worthington Works, Harrison

### New Mexico

THOMPSON, ROSS E., Manager, Deming Ice and Electric Co,, Deming

### New York

AMARI, YOSHIMASA, Engineer, The Kuhara Trading Co., New York
BURDICK, REGINALD H., Gas Engineer, Electric Bond and Share Co., New York

CASEY, Frank A., Warren-Nash Motor Corpn., New York
CHEEK, William C., Student Engineer, Worthington Pump and Machinery Corpn., Buffalo
CHRISTIE, Alvan B., J. J. Lynch Co., New York
CORLEY, John P., Sales Engineer, Ingersoll-Rand Co., New York
ELSMAN, John G., Manager, Salvage Department, United States Mail Steamship Co., New York
FEE, Harold R., Ingersoll-Rand Co., New York
FERGUSON, Louis A., Jr., Mechanical Engineer, Thompson-Starret Co., Long Island City
FILSKOV, Alfred, Technical Assistant, Beeler Organization, New York
FISHER, Harry L., Thos. E. Murray, Inc., New York
FREEMAN, Arthur E., Mechanical Engineer, F. A. Waldron, New York
FROMBERG, David, New York
GALLMEIER, Siegmund H., Engineer, Gordon & Kaelbe, Rochester
GOUDY, Carl F., Student, Pratt Institute, Brooklyn
GREENE, Whitney E., Student Engineer, Worthington Pump and Machinery Corpn., Buffalo
HARRIS, Benjamin E., Assistant Engineer, Ford, Bacon & Davis, New York
HEINEN, Frederick C., Mechanical Engineer, Southern Pacific Co., New York
HENNESSEY, John W., Assistant to Vice-President and General Manager, Art Work Shop, Buffalo
HILBERT, Charles D., Ford, Bacon & Davis, New York
HILDUM, Charles E., Engineer, Western Electric Co., New York
KEESING, Maurice, Ford Instrument Co., New York
LORD, Charles R., Regional Manager, Allied Machinery Co. of America, New York
LOWE, John, Vice-President and Secretary, M. T. Davidson Co., New York
McDERMOTT, Eugene, Brooklyn
McDONALD, Frederick, D. McDonald & Co., Plant of American Meter Co., Inc., Albany
MOONEY, Paul P., Estimator, J. J. McCabe Co., New York
NACKE, Arnold L., Sales Engineer, Manning-Maxwell & Moore, Inc., New York
PUGA, Guilermo, Associate-Editor, McGraw Hill Co., Inc., New York
SALMONSEN, Robert, Assistant Engineer, F. L. Smidth & Co., New York
SCHWARTZ, Francis H., Ford Instrument Co., New York
SHAW, George V., Engineer, A. S. Cameron Steam Pump Works, New York
SOULE, George, Student, Pratt Institute, Brooklyn
STERLING, George R., Chief Inspector, Employers Liability Assurance Corpn., New York (Re-election)
TATNALL, Francis G., Foamite Firefoam Co., New York
THOMA, Fred F., Mechanical Engineer, Ford, Bacon & Davis, New York
VOISINET, Walter E., Worthington Pump and Machinery Co., Buffalo
WILSON, Ezekiel J., Plant Engineer, F. C. Huyck & Sons, Albany
WEIR, Milton L., Assistant Steam Engineer, Lackawanna Steel Co., Buffalo
WISNER, Isle R., Draftsman, The Bagley & Sewell Co., Watertown

### Ohio

COPP, Charles F., Industrial Engineer, The Enterprise Manufacturing Co., Akron
DUNSCOMB, W. S., Twinsburg
GOUGH, Harry F., Plant Superintendent, Cincinnati Axle Division, The Standard Parts Co., Cincinnati
HAZEN, Deane S., Assistant Advertising Manager, The National Acme Co., Cleveland
HOLLAND, Frederick W., Chief Engineer, Streine Tool and Manufacturing Co., New Bremen
KMENTT, Cornel, Designer, Experimental Machinery, B. F. Goodrich Rubber Co., Akron
REISER, Irving W., Construction Engineer, Owens Bottle Co., Toledo
RUSSELL, Herbert O., Aeronautical Mechanical Engineer, Air Service, United States Army, Dayton
SAVAGE, Edwin S., Draftsman, The Cleveland Twist Drill Co., Cleveland
SMITH, H. Collier, President and General Manager, The Quickwork Co., St. Marys

### Oklahoma

COULSON, Herbert M., Division Superintendent, Sinclair Oil and Gas Co., Tulsa
McKINLEY, Carl S., Chief Engineer, Osage Cotton Oil Co., Muskogee

### Oregon

McDOUGALL, George F., Proprietor and Manager, G. F. McDougall Co., Portland

### Pennsylvania

CALHOUN, John V., Assistant Power Superintendent, E. I. duPont de Nemours, Philadelphia
CLARKE, Herbert E., Ordnance Inspector, Bethlehem Steel Co., Bethlehem
COOPER, Michael A., Branch Manager, J. N. Knight & Son, Philadelphia
DAVIES, Henry K., Pennsylvania Salt Manufacturing Co., Philadelphia
DIETERT, Harry W., Foreman Technical Appliances, Westinghouse Electric and Manufacturing Co., Lester
FREEMAN, Arthur C., Vice-President, H. W. Butterworth & Sons Co., Philadelphia
HEMPEL, John T., Erecting Engineer, Westinghouse Electric and Manufacturing Co., Lester
JIMESON, Robert M., Test Engineer, Macbeth-Evans Glass Co., Charleroi
LOWNES, N. Thayer, Engineering Assistant, Electric Department, Philadelphia Rapid Transit Co., Philadelphia
O'NEILL, James L., Inspector in charge of Tools and Gauges, Frankford Arsenal, Philadelphia
PARKER, William P., General Manager, The Ballinger Co., Philadelphia
PRICE, Morton M., Engineer and Agent, The Babcock & Wilcox Co., Philadelphia
RUST, Henry P., Engineer of Plant, William Cramp & Sons Ship & Engine Building Co., Philadelphia
SCHUSTER, William A., Assistant Professor of Mechanical Engineering, Kansas State Manual Training Normal School, Pittsburgh
SEACHRIST, Marriot B., Linoleum Department, Armstrong Cork Co., Lancaster
SLEATH, Arthur R., Philadelphia Manager, Heald Machine Co., Philadelphia
SLOAN, William A., Instructor in Mechanical Engineering, University of Pennsylvania, Philadelphia
VELANDER, Verner R., Chief Engineer, Marion Machine Foundry and Supply Co., Scottdale
WIDAU, William E., Sales Engineer, The Elliott Co., Jeannette
YOUNGLOVE, Charles M., Field Engineer, Westinghouse Electric and Manufacturing Co., Philadelphia

### Rhode Island

CAPWELL, Elmer A., Master Mechanic, Coventry Co., Anthony
WHITTAKER, Edward G., Textile Engineer, Universal Winding Co., Providence

### Texas

McINTIRE, Paul, Chief Engineer, American Brew Assn., Houston
MILTON, Hugh M., Assistant Professor, Mechanical Engineering, Agricultural and Mechanical College of Texas, College Station
SCHNEITTER, Lee, Engineer, Texas Power and Light Co., Dallas

### Virginia

SCHOFIELD, Frederick C., Designing Engineer, United Cigarette Machine Co., Lynchburg

### Wisconsin

HILL, Ray C., Efficiency Engineer, Falls Motors Corpn., Sheboygan Falls
PESTA, Martin H., Engineer, A. O. Smith Corpn., Milwaukee
ROVE, Louis C., Draftsman, Nordberg Manufacturing Co., Milwaukee
TURCOTT, David, Machine Designer, P. B. Yates Machine Co., Beloit

### Canada

BOOTH, George E., Engineering Staff, Hamilton Gear and Machine Co., Toronto, Ont
SCOTT, William G., Plant Engineer, Northern Electric Co., Ltd., Montreal, Que.
WAY, William C., Supervisor of Surveyor Laboratory, Topographical Surveys Branch, Department of Interior, Ottawa, Ont.

### China

HULL, Maynard V., Professor of Mechanical Engineering, Hunan Polytechnic Institute, Changsha, Hunan

### Cuba

BARKER, Guy A., Chief Engineer, Central Teresa Sugar Co., Ceiba Hueca, Oriente

### France

TAFFANEL, Jacques, Directeur des Etablissements, de le Campagnie des Forges, da Chatillon Commentry at Neuves, Maisons

### South America

LOXLEY, P. G., Assistant to Superintendent, Hydraulic Department, Central Argentine Railway Argentine Republic

### West Indies

PENNING, Cornelis, J. H., Manager, Holonulu Iron Works Co., Manila, P. I.

## CHANGE OF GRADING

### PROMOTION FROM ASSOCIATE

### New York

KLOCK, Frank B., Assistant Manager, Caustic Department, The Solvay Process Co., Syracuse

### PROMOTION FROM ASSOCIATE-MEMBER

### Massachusetts

BIGELOW, Carle M., Chief Engineer and Member of Firm, Cooley & Marion Co., Boston

### Michigan

BERRY, Charles H., Research Engineer, The Detroit Edison Co., Detroit

### New York

SCHECKENBACH, J. A. V., Assistant Chief Engineer, American Car and Foundry Co., New York
VANDEGRIFT, Wayne A., Mechanical Engineer, Turbine Engineering Department, General Electric Co., Schenectady

### Pennsylvania

FARR, Arthur V., Vice-President, General Manager, Calorizing Co. of Pittsburgh, Pittsburgh

### PROMOTION FROM JUNIOR

### California

BALLOU, John McK., Secretary and Chief Engineer, Los Angeles Engineering and Manufacturing Co., Los Angeles
BERG, Henning J., Mechanical Engineer, Standard Oil Co. of California, San Francisco

### Colorado

VIEDT, Harold B., Mines Manager, Radium Luminous Material Corpn., Naturite

### Connecticut

POIRIER, Austin E., International Silver Co., Meriden

### Illinois

ROYS, Lawrence, President, Western Structural Co., Moline

### Indiana

WILLIAMS, Edward H., General Manager, Perkins Corpn., Mishawaka

### Michigan

OWEN, Ira J., Superintendent, Bissell Carpet Sweeper Co., (Reinstatement), Grand Rapids
REID, Edward S., Vice-President and Chief Engineer, Northern Engineering Works, Detroit

### New Jersey

WEINTZ, Louis J., Mill Superintendent, The New Jersey Zinc Co., Ogdensburg

### New York

SCHULTE, Max J. L., Assistant Sales Manager, Green Fuel Economizer Co., Beacon
SEAMAN, Edwin H., Chief Engineer, Johnson & Higgins, New York

### Pennsylvania

WHITAKER, John C., Mechanical Engineer Philadelphia Quartz Co., Philadelphia

### Texas

THOMPSON, Herburt L., Sales Engineer, Ingersoll-Rand Co., Houston

### Washington

KRUEGER, George H., Chief Engineer, Anderson Draft Regulator Co., Seattle

### Canada

MOODY, Frederick H., Secretary, Treasurer, Powley & Townsley, Ltd., Toronto, Ont.

### Japan

GORHAM, William R., Chief Engineer, Jidosha Seizo Co., Osaka

### SUMMARY

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